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SEARCH REQUEST FORM

Scientific and Technical Information Center

9/17/03

Requester's Full Name: ~~305~~ S. Anna Jiang Examiner #: 78211 Date: ~~2/11/02~~

Art Unit: 1617 Phone Number 30 ~~3~~-1808 Serial Number: 10/077,596

Mail Box and Bldg/Room Location: ~~3E17~~ 2B19 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Proanthocyanidines for the treatment of amyloid + alpha-synuclein disease

Inventors (please provide full names):

Earliest Priority Filing Date: 3/15/2001

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

Paula,

Please search the compounds having oligomer or dimer of the formula I & II, these compounds extracted from plants: green teas (see claim 36) for example (Rank X)

Anna

9/17/03

****

STAFF USE ONLY	Type of Search		Vendors and cost where applicable	
Searcher: Sheppard	NA Sequence (#)		STN	
Searcher Phone #: 308-4499	AA Sequence (#)		Dialog	
Searcher Location:	Structure (#)		Questel/Orbit	
Date Searcher Picked Up:	Bibliographic		Dr.Link	
Date Completed: 9/23/03	Litigation		Lexis/Nexis	
Searcher Prep & Review Time:	Fulltext		Sequence Systems	
Clerical Prep Time:	Patent Family		WWW/Internet	
Online Time:	Other		Other (specify)	

PTO-1590 (1-2000)

STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 104288

TO: Shaojia A Jiang **Location:** **Art Unit: 1617** **September 22, 2003** **Case Serial Number: 10/077596**	**From: P. Sheppard** **Location: CM1-1E03** **Phone: (703) 308-4499** **sheppard@uspto.gov**

3F1

Search Notes

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FILE 'HCAPLUS' ENTERED AT 09:13:30 ON 23 SEP 2003
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FILE COVERS 1907 - 23 Sep 2003  VOL 139 ISS 13
FILE LAST UPDATED: 22 Sep 2003  (20030922/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


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L5                STR
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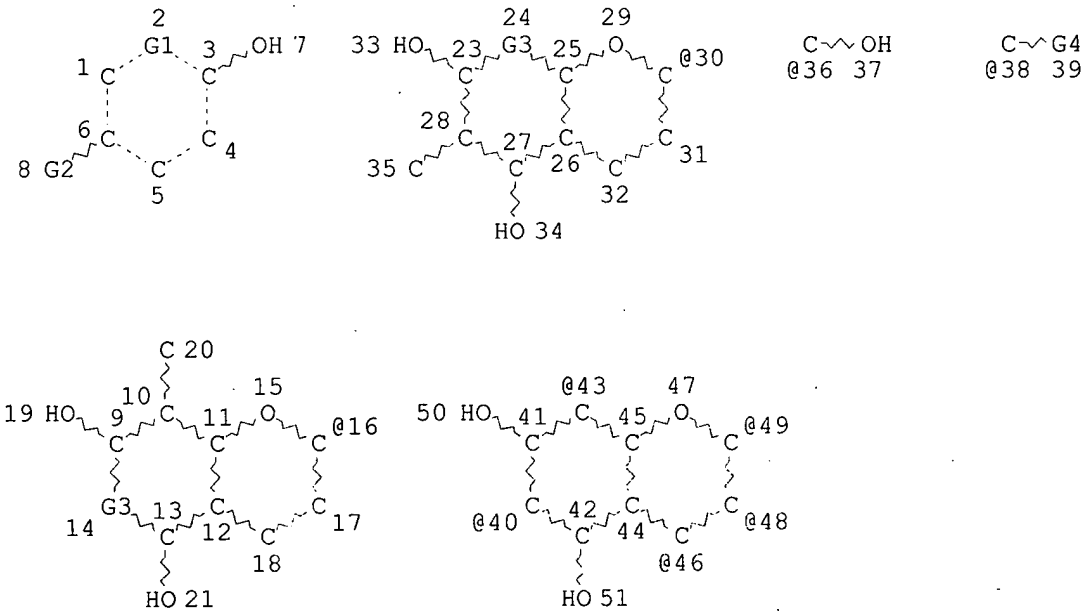


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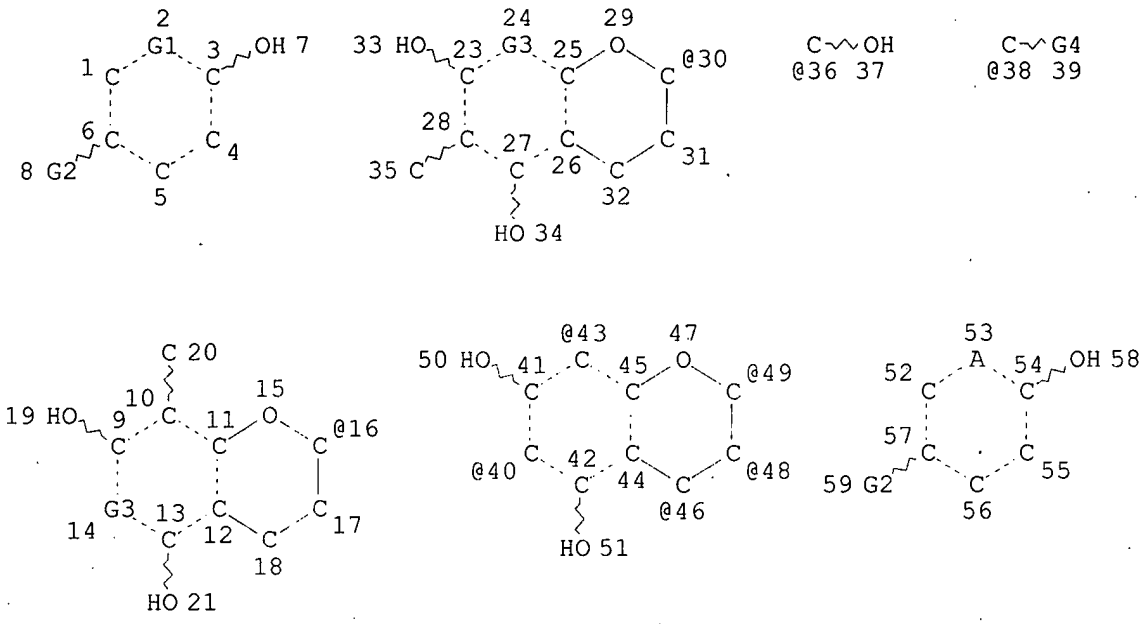

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DEFAULT ECLEVEL IS LIMITED
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GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 58

STEREO ATTRIBUTES: NONE
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L10 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L9

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L10 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:809679 HCAPLUS
DOCUMENT NUMBER: 136:101325
TITLE: Isolation and Structures of Oligomeric Wine Pigments by Bisulfite-Mediated Ion-Exchange Chromatography
AUTHOR(S): Asenstorfer, Robert E.; Hayasaka, Yoji; Jones, Graham P.
CORPORATE SOURCE: Department of Horticulture Viticulture and Oenology, University of Adelaide, Glen Osmond, 5064, Australia
SOURCE: Journal of Agricultural and Food Chemistry (2001),

49(12), 5957-5963
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Methods have been developed that are based on cation exchange chromatog. in the absence and presence of excess bisulfite for the isolation of wine pigments from Australian red wine and grape marc ext. The pigments were identified using HPLC and electrospray ionization mass spectrometry. The mass spectral data indicate that these pigments are C4-substituted anthocyanins with a tetracyclic structure. The pigments form a series of closely related oligomeric pigments which include those previously described in the literature, such as pigment A and vitisin A, as well as some newly identified pigments.

IT **388089-44-9 388089-45-0 388089-46-1**
388089-47-2 388089-48-3 388089-49-4
388089-62-1
RL: ANT (Analyte); NPO (Natural product occurrence); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)
(isolation and structures of oligomeric wine pigments by bisulfite-mediated ion-exchange chromatog.)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1992:469641 HCAPLUS
DOCUMENT NUMBER: 117:69641
TITLE: Synthesis of condensed tannin derivatives regiospecifically linked through a single interflavanoid-linkage and their protein-precipitating capacities
AUTHOR(S): Kawamoto, Haruo; Nakatsubo, Fumiaki; Murakami, Koji
CORPORATE SOURCE: Fac. Agric., Kyoto Univ., Kyoto, 606-01, Japan
SOURCE: Mokuzai Gakkaishi (1991), 37(8), 741-7
CODEN: MKZGA7; ISSN: 0021-4795
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Condensed tannin derivs. (dimers, trimers and oligomers) with only C(4)-C(6) or C(4)-C(5) interflavonoid-linkages were synthesized from 8-methyl- or 6-methyl-flavan-3,4-diol. From a comparison of their protein-pptg. capacities, the following relationships between the mode of interflavanoid-linkage or the d.p. of condensed tannin and the protein-pptg. capacity were obtained. Monomers and dimers have no protein-pptg. capacities and the protein-pptg. capacity increases with an increase in the mol. wt. of condensed tannin. Condensed tannins linked through C(4)-C(6) linkage have greater protein-pptg. capacity than those linked through C(4)-C(8) linkage and this tendency is remarkable for trimers.

IT **141238-49-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

=> fil caold
FILE 'CAOLD' ENTERED AT 09:14:01 ON 23 SEP 2003

FILE COVERS 1907-1966
FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate

substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

This file supports REG1stRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

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L11 0 L9

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=> fil reg
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 22 SEP 2003 HIGHEST RN 591204-55-6
DICTIONARY FILE UPDATES: 22 SEP 2003 HIGHEST RN 591204-55-6

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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L9 ANSWER 1 OF 8 REGISTRY COPYRIGHT 2003 ACS on STN
RN 388089-62-1 REGISTRY
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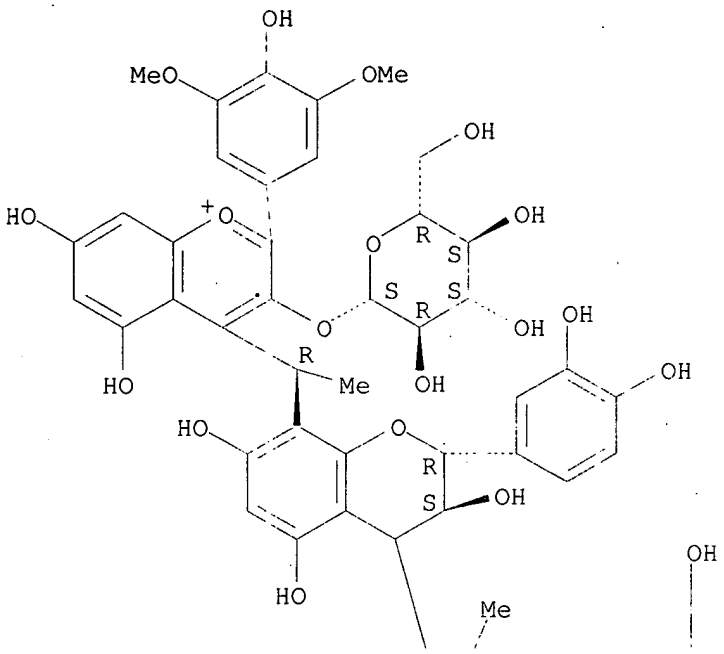
FS STEREOSEARCH
MF C91 H89 O36 . Cl
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

PAGE 1-A



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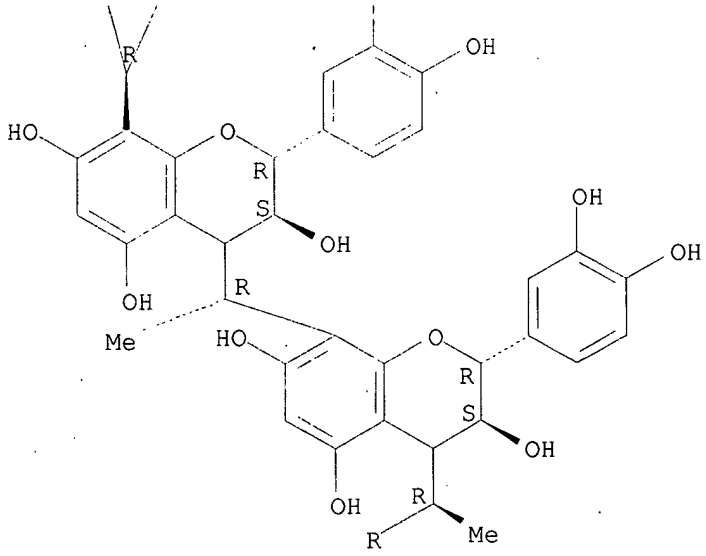

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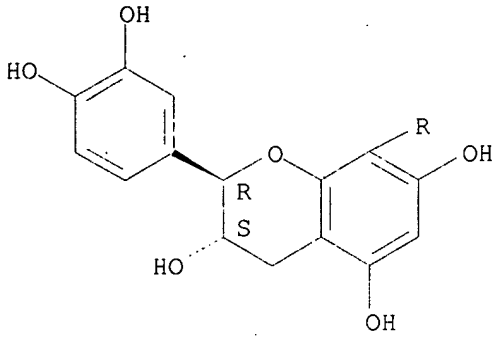

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1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:101325

L9 ANSWER 2 OF 8 REGISTRY COPYRIGHT 2003 ACS on STN
RN 388089-49-4 REGISTRY
CN 1-Benzopyrylium, 4-[(1R)-1-[(2R,3S)-2-(3,4-dihydroxyphenyl)-4-[(1R)-1-[(2R,3S)-2-(3,4-dihydroxyphenyl)-4-[(1R)-1-[(2R,3S)-2-(3,4-dihydroxyphenyl)-3,4-dihydro-3,5,7-trihydroxy-2H-1-benzopyran-8-yl]ethyl]-3,4-dihydro-3,5,7-trihydroxy-2H-1-benzopyran-8-yl]ethyl]-3,4-dihydro-3,5,7-trihydroxy-2H-1-benzopyran-8-yl]ethyl]-5,7-dihydroxy-2-(4-hydroxy-3,5-dimethoxyphenyl)-3-[[6-O-[3-(4-hydroxyphenyl)-1-oxo-2-propenyl]-.beta.-D-glucopyranosyl]oxy]-, chloride (9CI) (CA INDEX NAME)
FS STEREOSEARCH
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SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry unknown.

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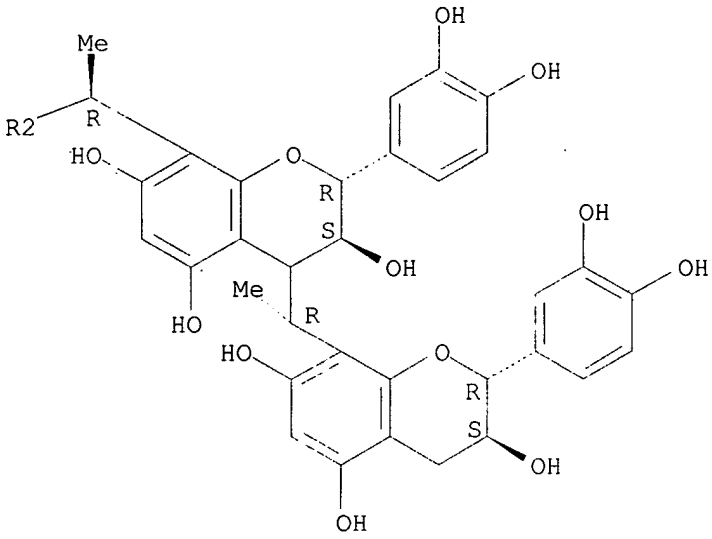

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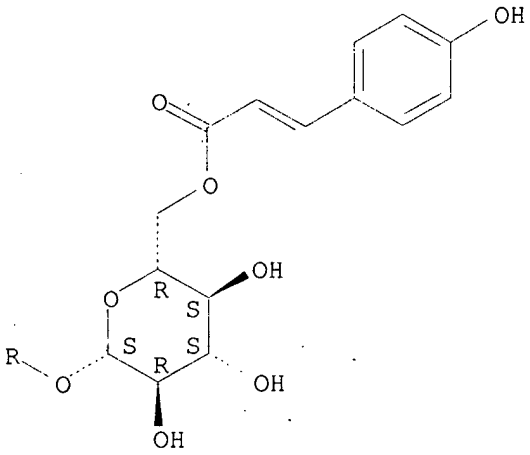

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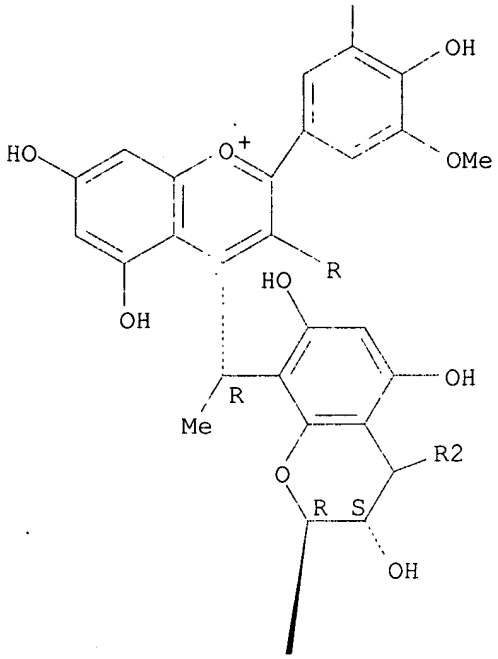

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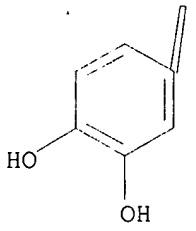

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1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:101325

L9 ANSWER 3 OF 8 REGISTRY COPYRIGHT 2003 ACS on STN
RN 388089-48-3 REGISTRY
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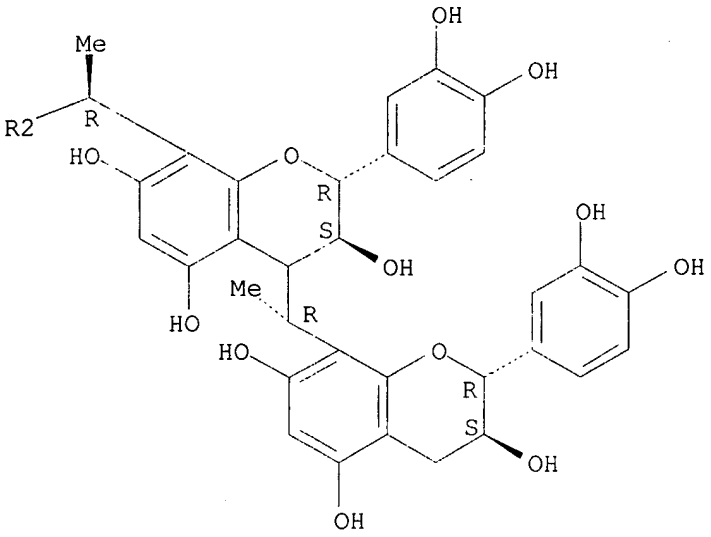
MF C76 H75 O31 . Cl
SR CA

LC STN Files: CA, CAPLUS

Absolute stereochemistry.

PAGE 1-A



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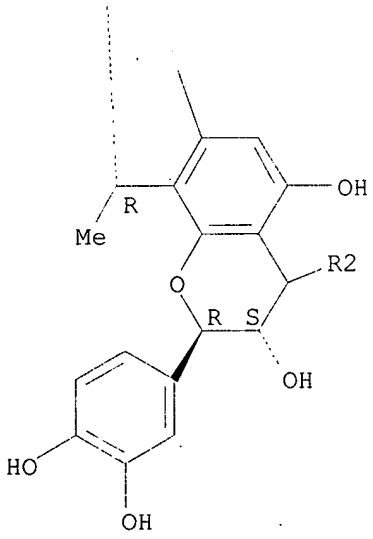

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1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:101325

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RN 388089-47-2 REGISTRY
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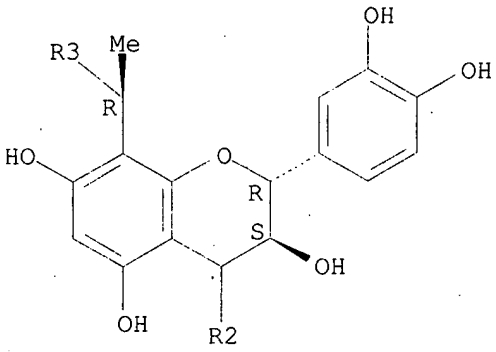
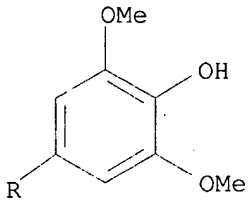
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

PAGE 1-A





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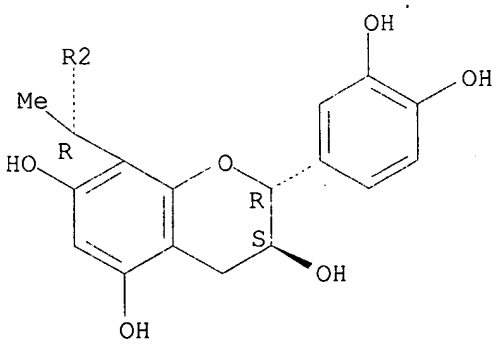

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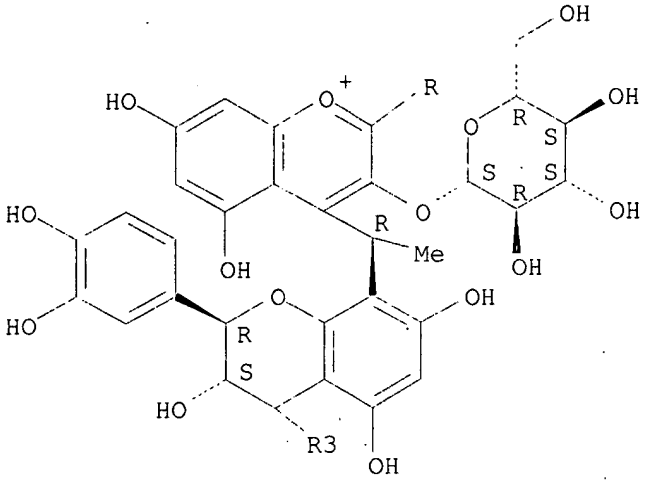

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1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:101325

L9 ANSWER 5 OF 8 REGISTRY COPYRIGHT 2003 ACS on STN
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FS STEREOSEARCH
MF C66 H63 O26 . Cl
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry unknown.

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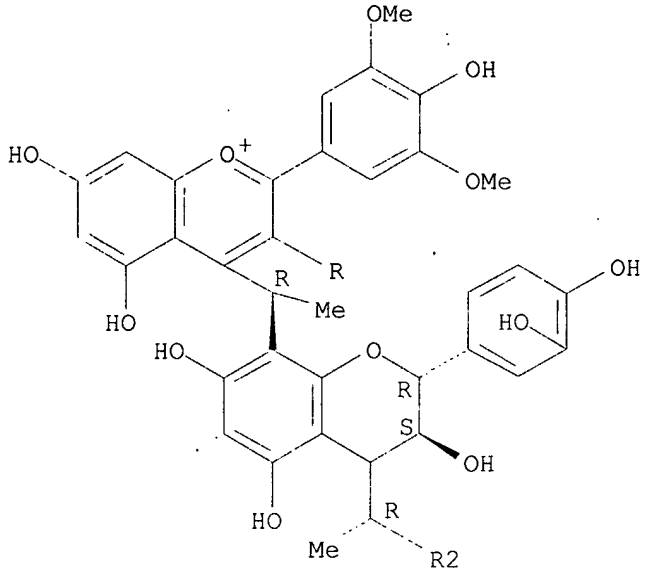

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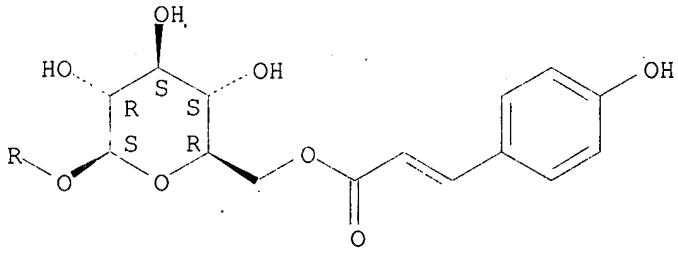

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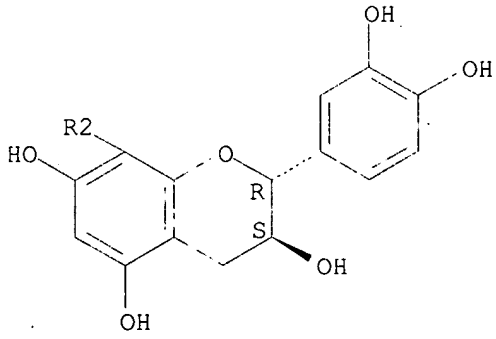

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1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:101325

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RN 388089-45-0 REGISTRY
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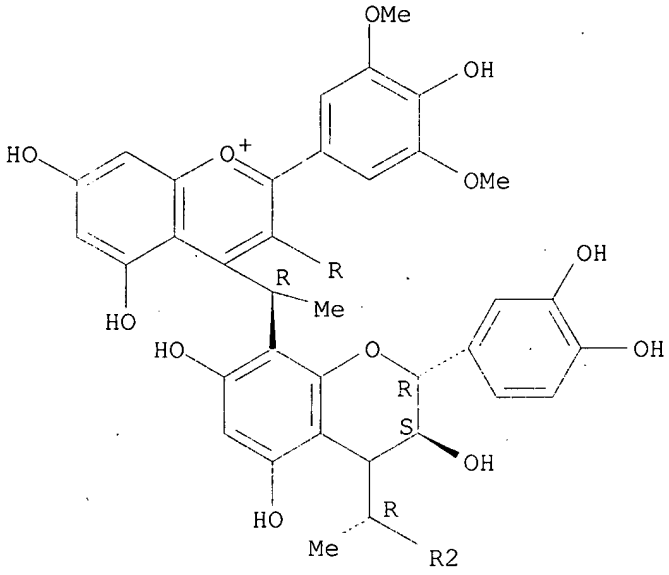
FS STEREOSEARCH
MF C59 H59 O25 . Cl
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

PAGE 1-A



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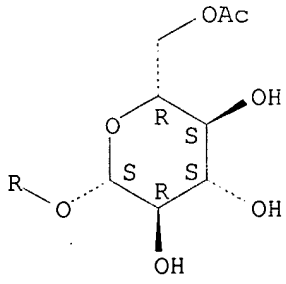

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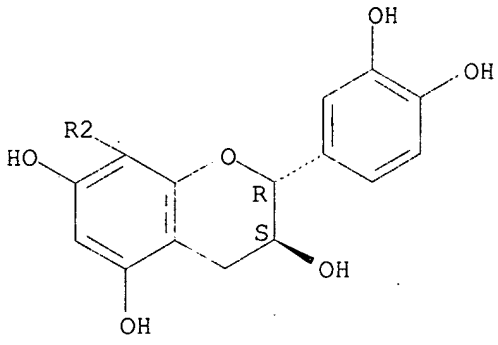

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1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:101325

L9 ANSWER 7 OF 8 REGISTRY COPYRIGHT 2003 ACS on STN
RN 388089-44-9 REGISTRY
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FS STEREOSEARCH
MF C57 H57 O24 . Cl
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

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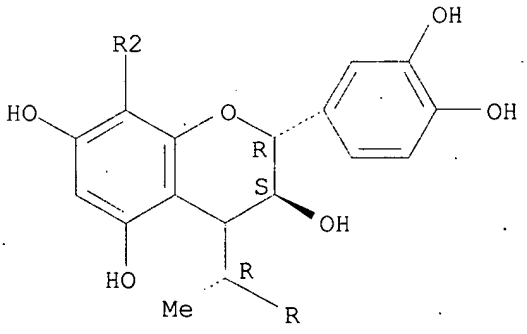

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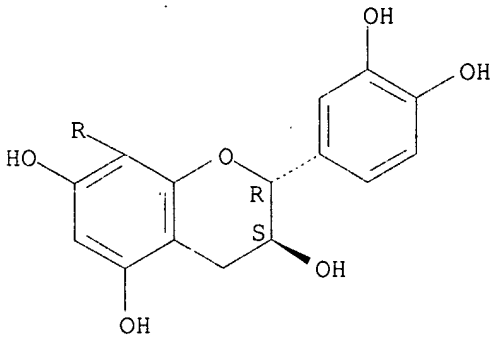

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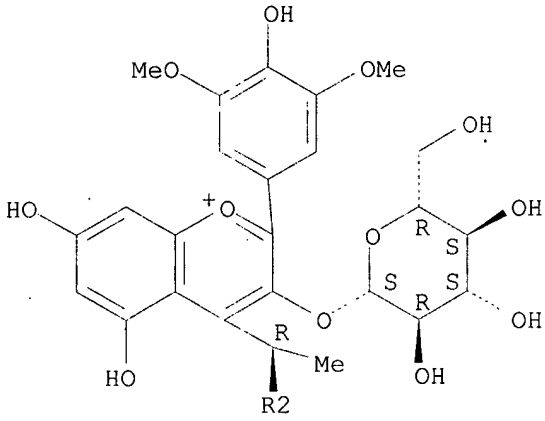

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1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:101325

L9 ANSWER 8 OF 8 REGISTRY COPYRIGHT 2003 ACS on STN
RN 141238-49-5 REGISTRY
CN [4,6':4',6''-Ter-2H-1-benzopyran]-3,3',3'',5,5',5'',7,7',7''-nonol, 2,2',2''-tris(3,4-dihydroxyphenyl)-3,3',3'',4,4',4''-hexahydro-8,8',8''-trimethyl-, [2.alpha.,3.beta.,4.alpha.[2'R*,3'S*,4'R*(2''R*,3''S*)]]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN [4,6':4',6''-Ter-2H-1-benzopyran]-3,3',3'',5,5',5'',7,7',7''-nonol, 2,2',2''-tris(3,4-dihydroxyphenyl)-3,3',3'',4,4',4''-hexahydro-8,8',8''-trimethyl-, [2.alpha.,3.beta.,4.alpha.[2'R*,3'S*,4'R*(2''R*,3''S*)]]-(.+-.)-
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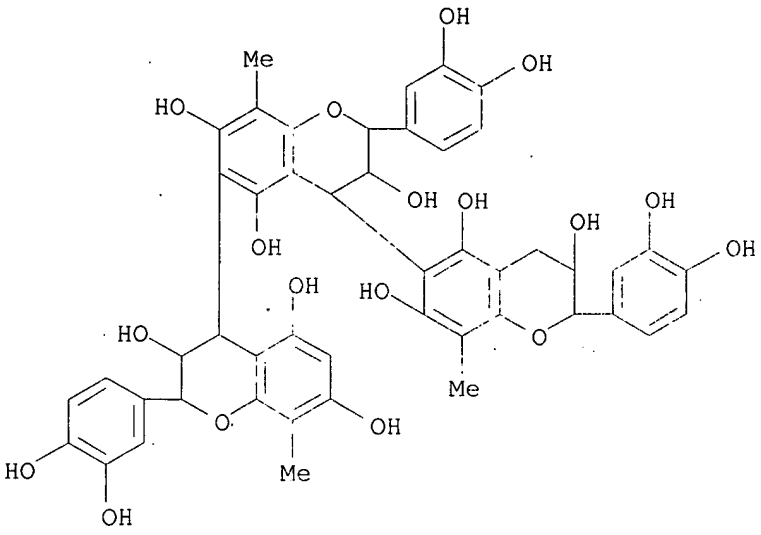
SR CA
LC STN Files: CA, CAPLUS



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USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 23 Sep 2003  VOL 139 ISS 13
FILE LAST UPDATED: 22 Sep 2003  (20030922/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

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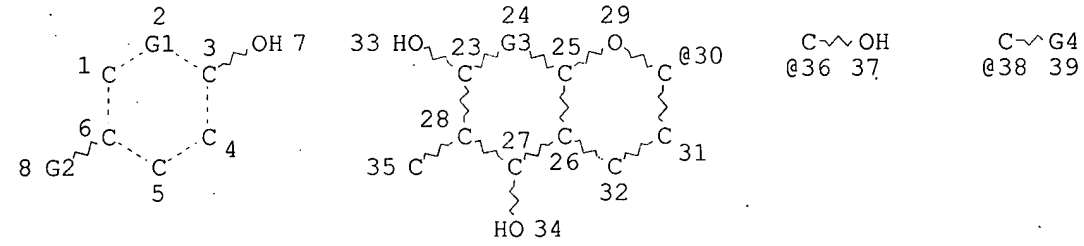

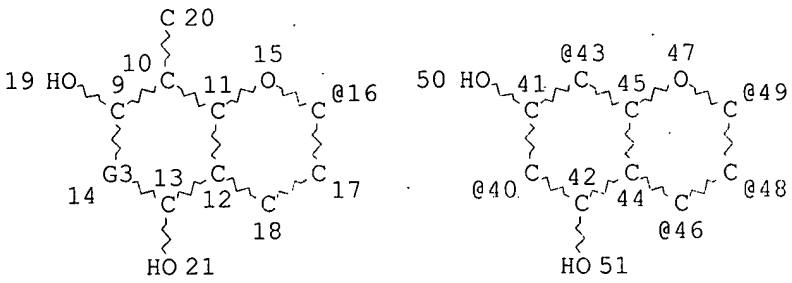


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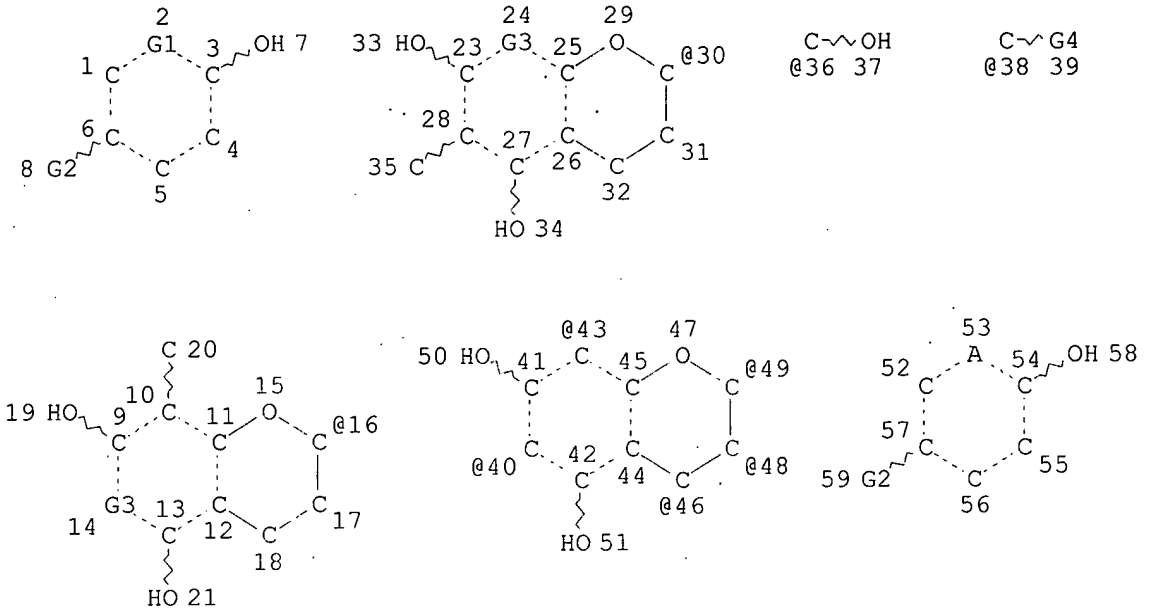

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DEFAULT ECLEVEL IS LIMITED
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GRAPH ATTRIBUTES:
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NUMBER OF NODES IS 58

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L16 15 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L13
L17 110 SEA FILE=HCAPLUS ABB=ON PLU=ON L13(L)(PLANT OR TEA)
L18 3788 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 OR L4 OR CHOLROGEN? OR EPICATECHIN OR EPIAFZELECHIN
L19 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 AND L17
L20 19 SEA FILE=HCAPLUS ABB=ON PLU=ON L16 OR L19

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L20 ANSWER 1 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:193543 HCAPLUS
DOCUMENT NUMBER: 138:367880
TITLE: Evaluation of the anti-oxidative effect (in vitro) of **tea** polyphenols
AUTHOR(S): Hashimoto, Fumio; Ono, Masateru; Masuoka, Chikako; Ito, Yasuyuki; Sakata, Yusuke; Shimizu, Keiichi; Nonaka, Gen-Ichiro; Nishioka, Itsuo; Nohara, Toshihiro
CORPORATE SOURCE: Faculty of Agriculture, Kagoshima University, Korimoto 1-21-24, Kagoshima, 890-0065, Japan
SOURCE: Bioscience, Biotechnology, and Biochemistry (2003), 67(2), 396-401
CODEN: BBBIEJ; ISSN: 0916-8451
PUBLISHER: Japan Society for Bioscience, Biotechnology, and Agrochemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Forty-three polyphenols from **tea** leaves were evaluated for their anti-oxidative effect against lipid peroxidn. by the ferric thiocyanate method in vitro. Among these, 1,4,6-tri-O-galloyl-.beta.-D-glucose (hydrolyzable tannin) showed the highest anti-oxidative activity against lipid peroxidn., even stronger than that of 3-tert.-butyl-4-hydroxyanisole (BHA). The assay demonstrates that **tea** polyphenols, except for desgalloylated dimeric **proanthocyanidins** that possess a catechin structure in the upper unit and desgalloylated flavan-3-ols, and excepting theaflavin 3,3'-di-O-gallate, had more anti-oxidative activity than that of .alpha.-tocopherol. The chem. structure-activity relationship shows that the anti-oxidative action advanced with the condensation of two mols. of flavan-3-ols as well as with 3-O-acylation in the flavan skeleton such as that by galloyl, (3'-O-methyl)-galloyl, and p-coumaroyl groups.
IT **490-46-0**, (-)-**Epicatechin** **24808-04-6**, (-)-**Epiafzelechin** **29106-49-8**, Procyanidin B-2 **121795-66-2**, Assamicain A **121795-67-3**, Assamicain C **121844-27-7**, Assamicain B **126716-09-4**, Didesgalloyloolonghomobisflavan A **126737-60-8**, Oolonghomobisflavan A
RL: BSU (Biological study, unclassified); BIOL (Biological study) (in vitro antioxidative effects of **tea** polyphenols against lipid peroxidn.)
REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:392918 HCAPLUS
DOCUMENT NUMBER: 137:62456
TITLE: Effect of oxygenation on polyphenol changes occurring in the course of winemaking
AUTHOR(S): Atanasova, Vessela; Fulcrand, Helene; Cheynier, Veronique; Moutounet, Michel
CORPORATE SOURCE: INRA-UMR Sciences pour l'Oenologie, Montpellier, 34060, Fr.
SOURCE: Analytica Chimica Acta (2002), 458(1), 15-27
CODEN: ACACAM; ISSN: 0003-2670
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The influence of controlled oxygenation on the color and phenolic compn. of red wine was studied by UV-VIS spectrophotometry, liq. chromatog. (LC) coupled to diode array detection (DAD) and electrospray ionization mass

spectrometry, and thiolysis. The comparison between the control and oxygenated wines demonstrated changes in color characteristics along with a significant increase in concns. of pyranoanthocyanins, ethyl-bridged compds. and derived pigments both with storage time and with oxidn. Principal component anal. was applied to wine anal. data measured throughout the conservation period. The effect of the storage time and oxygenation was clearly reflected. Mass-spectrometric anal. of the wines demonstrated the presence of compds. which are markers of reactions involving acetaldehyde. Two types of mechanisms were obsd. The first concerns acetaldehyde condensation reactions and the second, the cycloaddn. process between anthocyanins and flavanols mediated by acetaldehyde, generating tannin-pyranoanthocyanins. The presence in wines of trimeric structures resulting from these mechanisms, as well as the results obtained after thiolysis of the fraction contg. polymeric species obtained by Fractogel chromatog., confirm that **proanthocyanidins** react with acetaldehyde in the same way as flavanol monomers.

IT **189073-31-2 439791-73-8**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(oxygenation effect on polyphenols during winemaking)

REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:211103 HCAPLUS
DOCUMENT NUMBER: 138:163393
TITLE: **Proanthocyanidin** glycosides and related polyphenols from cacao liquor and their antioxidant effects
AUTHOR(S): Hatano, Tsutomu; Miyatake, Haruka; Natsume, Midori; Osakabe, Naomi; Takizawa, Toshio; Ito, Hideyuki; Yoshida, Takashi
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Okayama University, Tsushima, Okayama, 700, Japan
SOURCE: Phytochemistry (2002), 59(7), 749-758
CODEN: PYTCAS; ISSN: 0031-9422
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Purifn. of polar fractions from cacao liquor exts. gave 17 phenolics including four new compds. The new compds. were characterized as a C-glycosidic flavan, an O-glycoside of a dimeric and two O-glycosides of trimeric A-linked **proanthocyanidins**, on the basis of spectroscopic data. Isolated polyphenols showed inhibitory effects on NADP-dependent lipid peroxidn. in microsomes and on the autoxidn. of linoleic acid. These effects were attributed to the radical-scavenging activity in the peroxidn. chain reactions, based on the findings that the cacao polyphenols effectively scavenged the 1,1-diphenyl-2-picrylhydrazyl radical.

IT **12798-57-1**, Procyanidin B5 **29106-49-8**, Procyanidin B2 **37064-30-5**, Procyanidin C1
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(**proanthocyanidin** glycosides and related polyphenols from cacao liquor and their antioxidant effects)

IT **41743-41-3P**, **Proanthocyanidin** A2 **81555-08-0P**, Bis-8,8'-catechinylmethane **103883-03-0P**, **Proanthocyanidin** A1
RL: NPO (Natural product occurrence); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(**proanthocyanidin** glycosides and related polyphenols from cacao liquor and their antioxidant effects)

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1996:190224 HCAPLUS
DOCUMENT NUMBER: 124:331679
TITLE: Anti-AIDS agents. 24. Evaluation of **tea** polyphenols as anti-HIV agents
AUTHOR(S): Hashimoto, Fumio; Kashiwada, Yoshiki; Nonaka, Genichiro; Nishioka, Itsuo; Nohara, Toshihiro; Cosentino, L. Mark; Lee, Kuo-Hsiung
CORPORATE SOURCE: Sch. Pharmacy, Univ. North Carolina, Chapel Hill, NC, 27599, USA
SOURCE: Bioorganic & Medicinal Chemistry Letters (1996), 6(6), 695-700
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Thirty-eight **tea** polyphenols were evaluated for their inhibitory effect against HIV replication in H9 lymphocyte cells. 8-C-ascorbyl-(-)-epigallocatechin and theasinensin-D demonstrated relatively potent anti-HIV activity with EC50 values of 4 and 8 .mu.g/mL and therapeutic indexes of 9.5 and 5, resp.
IT **490-46-0 24808-04-6 121795-66-2 121795-67-3 121844-27-7 126716-06-1 126737-60-8 176107-91-8**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(evaluation of **tea** polyphenols as anti-HIV agents)

L20 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1995:195660 HCAPLUS
DOCUMENT NUMBER: 122:30169
TITLE: Chemical evidence for the de-astringency (insolubilization of tannins) of persimmon fruit
AUTHOR(S): Tanaka, Takashi; Takahashi, Ryuji; Kouno, Isao; Nonaka, Gen-ichiro
CORPORATE SOURCE: Fac. Pharm. Sci., Nagasaki Univ., Nagasaki, 852; Japan
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1994), (20), 3013-22
CODEN: JCPRB4; ISSN: 0300-922X
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB After artificial removal of the astringency from persimmon fruit by treatment with ethanol, thiol-promoted degrdn. of the insolubilized **proanthocyanidin** polymers with 2-sulfanylethanol yielded 4.beta.-(2-hydroxyethylsulfanyl)-6- and -8-[1-(2-hydroxyethylsulfanyl)ethyl]-flavan-3-ols. Furthermore, when deuteriated ethanol was used for de-astringency, the deuterium atoms were incorporated into the C2 unit attached to the A-ring of these compds. These findings evidently show that acetaldehyde formed in situ from ethanol plays an important role in polymn. (insolubilization) of water-sol. **proanthocyanidins**, causing the loss of astringency.
IT **159663-06-6P 159663-07-7P 159663-11-3P 159663-14-6P**
RL: PRP (Properties); PUR (Purification or recovery); PREP (Preparation)
(isolation and NMR data for thiol-promoted degrdn. products from deastringent persimmon fruit ext.)
IT **159663-01-1P 159663-02-2P**
RL: PRP (Properties); PUR (Purification or recovery); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(isolation and desulfurization of and NMR data for thiol-promoted degrdn. products from deastringent persimmon fruit ext.)

IT **159663-04-4P 159663-05-5P 159663-08-8P**
159663-09-9P 159663-10-2P 159663-15-7P
RL: PRP (Properties); PUR (Purification or recovery); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(isolation and hydrolysis of and NMR data for thiol-promoted degrdn. products from deastringent persimmon fruit ext.)

IT **159663-12-4P 159663-13-5P 159702-16-6P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and NMR data for)

IT **159663-03-3**
RL: PRP (Properties)
(spectral properties of)

L20 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1994:253139 HCAPLUS
DOCUMENT NUMBER: 120:253139
TITLE: Anti-HIV tannins from Camellia japonica and related **plant** species
AUTHOR(S): Hatano, Tsutomu; Han, Li; Taniguchi, Shoko; Chou, Tong; Shingu, Tetsuro; Sakagami, Hiroshi; Takeda, Minoru; Nakashima, Hideki; Murayama, Tsutomu; et al.
CORPORATE SOURCE: Fac. Pharm. Sci., Okayama Univ., Okayama, 700, Japan
SOURCE: Tennen Yuki Kagobutsu Toronkai Koen Yoshishu (1992), 34th, 510-517
CODEN: TYKYDS
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

AB Eight new tannins named camelliatannins A-H were isolated from the leaf of Camellia japonica (Theaceae). Structural study revealed that camelliatannins A (10), B (11), C (12), E (14), F (15) and G (16) are complex tannins consisting of a monomeric hydrolyzable tannin and **epicatechin**, and camelliatannin H (17) is a dimeric hydrolyzable tannin. Camelliatannin D (13) is the first example of complex tannin composed of a dimeric hydrolyzable tannin and **epicatechin**. Compds. 3-9 were also isolated from the leaf. Camelliins A (1) and B (2), dimeric hydrolyzable tannins isolated from the flower of C. japonica, were not found in the leaf, but were isolated from the fruit. Three complex tannins, 10, 13 and 15, and a dimeric hydrolyzable tannin, 17, along with 3, 5, 7, 8, 23 and 24, were also isolated from the fruit. Camelliins A and B were isolated from the flower of C. sasanqua, and were found in the ext. of the leaf of C. oleifera. Schimawalin B (25), a dimeric hydrolyzable tannin, and 2, were isolated from the flower of Schima wallichii, a theaceous **plant**. Among the tannins isolated from the theaceous **plants**, 2, 10 and 25 inhibited the cytopathic effects induced by human immunodeficiency virus (HIV) (EC50, 4.8-11.8 .mu.g/mL). Gemin D (6), a monomeric hydrolyzable tannin contained in several theaceous **plants**, also showed the anti-HIV activity (EC50, 2.0 .mu.g/mL).

IT **490-46-0 148132-92-7**, Camelliatannin E
148159-87-9, Camelliatannin D **153235-02-0**
154524-52-4, Camelliatannin C
RL: BIOL (Biological study)
(structure and anti-HIV activity of, from Camellia japonica and related **plant** species)

L20 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1994:128300 HCAPLUS
DOCUMENT NUMBER: 120:128300
TITLE: Inhibitory effects of tannins on NADH dehydrogenases of various organisms
AUTHOR(S): Konishi, Kiyoshi; Adachi, Hirokazu; Ishigaki, Naoko;

Kanamura, Yumiko; Adachi, Isao; Tanaka, Takashi; Nishioka, Itsuo; Nonaka, Genichiro; Horikoshi, Isamu
CORPORATE SOURCE: Fac. Med., Toyama Med. Pharm. Univ., Toyama, 930-01, Japan
SOURCE: Biological & Pharmaceutical Bulletin (1993), 16(7), 716-18
CODEN: BPBLEO; ISSN: 0918-6158
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effects of 33 purified tannins and related compds. on NADH-ubiquinone-1 oxidoreductase activity in 4 kinds of organism (Paracoccus denitrificans, Bacillus subtilis, Photobacterium phosphoreum, and Thermus thermophilus HB-8) and rat liver mitochondria were examd. In addn. to pentagalloylglucose, which was reported as a potent inhibitor of NADH dehydrogenases (NDH), sanguiin H-11, oolonghomobisflavan A, and polymd. procyanidin were potent inhibitors for both types of NDH (NDH-1 and NDH-2). It was found that some other tannins contained in tea were also inhibitors of NDH from all organisms.

IT **37064-30-5**, Procyanidin C-1 **121844-27-7**, Assamicain B **126737-60-8**, Oolonghomobisflavan A
RL: BIOL (Biological study)
(inhibitory properties of, on NADH dehydrogenases of liver mitochondria and bacteria)

L20 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1990:196860 HCAPLUS
DOCUMENT NUMBER: 112:196860
TITLE: Tannins and related compounds. XC. 8-C-ascorbyl (-)-epigallocatechin 3-O-gallate and novel dimeric flavan-3-ols, oolonghomobisflavans A and B, from oolong **tea**. (3)
AUTHOR(S): Hashimoto, Fumio; Nonaka, Genichiro; Nishioka, Itsuo
CORPORATE SOURCE: Fac. Pharm. Sci., Kyushu Univ., Fukuoka, 812, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1989), 37(12), 3255-63
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 112:196860
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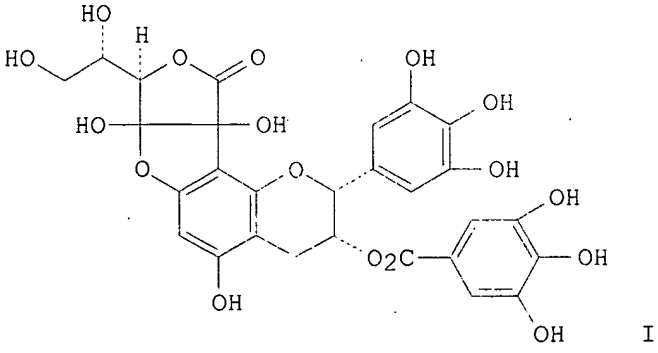

I

AB A chem. examn. of the polyphenolic constituents in com. oolong **tea** led to the isolation of 32 compds., including a new flavan-3-ol, 2 novel dimeric flavan-3-ols named oolonghomobisflavans A and B, and 8 new **proanthocyanidins**, together with 21 known polyphenols, including **proanthocyanidins**, hydrolyzable tannins, and red pigments. On the

basis of chem. and spectroscopic evidence, the flavan-3-ol was characterized as 8-C-ascorbyl (-)-epigallocatechin 3-O-gallate (I), and oolonghomobisflavans A and B were detd. to be dimeric flavan-3-ols in which 2 units were linked through a methylene bridge at the 8,8'- and 8,6'-positions, resp. The structures of the new **proanthocyanidins** were elucidated, mainly by tannase hydrolysis and thiolytic degrdn., to be **epicatechin**-(4.beta..fwdarw.8)-epigallocatechin 3-O-gallate, **epicatechin** 3-O-gallate-(4.beta..fwdarw.8)-epigallocatechin 3-O-gallate, catechin-(4.alpha..fwdarw.8)-epigallocatechin 3-O-gallate, prodelphinidin B-4 3'-O-gallate, **epicatechin** 3-O-gallate-(4.beta..fwdarw.6)-epigallocatechin 3-O-gallate, epigallocatechin 3-O-gallate-(4.beta..fwdarw.6)-**epicatechin** 3-O-gallate, epi-afzelechin 3-O-gallate-(4.beta..fwdarw.6)-epigallocatechin 3-O-gallate, and prodelphinidin B-2 3'-O-gallate.

IT **23567-23-9 29106-49-8 79907-44-1**
126715-88-6, Oolonghomobisflavan B **126737-60-8**, Oolonghomobisflavan A
RL: BIOL (Biological study)
(of oolong **tea**)

IT **126716-06-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and hydrolysis of)

IT **126716-02-7P 126716-04-9P 126716-09-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and methylation of)

L20 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1989:476723 HCAPLUS
DOCUMENT NUMBER: 111:76723
TITLE: Tannins and related compounds. LXXVII. Novel chalcan-flavan dimers, assamicains A, B and C, and a new flavan-3-ol and **proanthocyanidins** from the fresh leaves of Camellia sinensis L. var. assamica Kitamura
AUTHOR(S): Hashimoto, Fumio; Nonaka, Genichiro; Nishioka, Itsuo
CORPORATE SOURCE: Fac. Pharm. Sci., Kyushu Univ., Fukuoka, 812, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1989), 37(1), 77-85
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 111:76723
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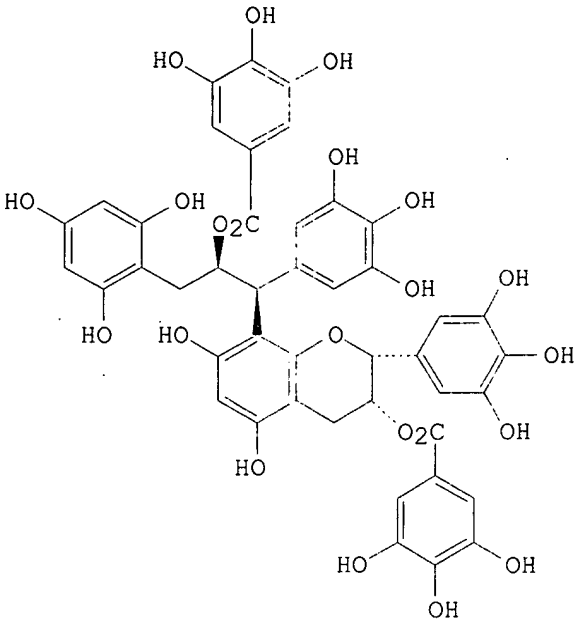

I

AB Three novel chalcan-flavan dimers, assamicains A (I), B, and C, and a new flavan-3-ol, (-)-epigallocatechin 3-O-caffeoate, and **proanthocyanidins** (catechin-(4a-8)-epigallocatechin and gallocatechin-(4.alpha.-8)-**epicatechin**) have been isolated, together with known flavan-3-ols, **proanthocyanidins**, theasinensins, and hydrolyzable tannins, from the fresh leaves of **tea** (C. sinensis var. assamica) (Camelliaceae). Structures have been established on the basis of spectroscopic evidence in conjunction with thiolytic degrdn. and enzymic hydrolysis.

IT **121795-66-2**, Assamicain A **121795-67-3**
121844-27-7, Assamicain B
RL: BIOL (Biological study)
(from fresh leaves of Camellia sinensis assamica, isolation and structure and thiolytic degrdn. of)

IT **23567-23-9 29106-49-8 37064-30-5**
RL: BIOL (Biological study)
(of fresh leaves of Camellia sinensis assamica)

IT **490-46-0**, (-)-**Epicatechin 24808-04-6**, (-)-**Epiafzelechin**
RL: BIOL (Biological study)
(of Camellia sinensis assamica fresh leaves)

IT **121795-71-9P 121795-72-0P 121844-29-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and methylation of)

IT **121795-70-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L20 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1988:470343 HCAPLUS
DOCUMENT NUMBER: 109:70343
TITLE: Tannins and related compounds. Part 62. Prenylated flavan-3-ols and procyanidins from Illicium anisatum
AUTHOR(S): Morimoto, Satoshi; Tanabe, Hisako; Nonaka, Genichiro; Nishioka, Itsuo
CORPORATE SOURCE: Fac. Pharm. Sci., Kyushu Univ., Fukuoka, 812, Japan

SOURCE: Phytochemistry (1988), 27(3), 907-10
CODEN: PYTCAS; ISSN: 0031-9422
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Two prenylated flavan-3-ols were isolated from I. anisatum and their structures characterized by chem. and spectroscopic means as 8-(3,3-dimethylallyl)-(+)-catechin and 6-(3,3-dimethylallyl)-(+)-catechin. In addn., a new **proanthocyanidin** was isolated, together with several know compds. The structure of the procyanidin was established as catechin-(4.alpha..fwdarw.8)-epicatechin-(4.beta..fwdarw.8)-catechin.
IT **20315-25-7**, Procyanidin B-1 **115532-12-2**
115532-13-3
RL: BIOL (Biological study)
(from Illicium anisatum, isolation and identification of)

L20 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1988:408263 HCAPLUS
DOCUMENT NUMBER: 109:8263
TITLE: Condensed tannins: desulfonation of hydroxybenzylsulfonic acids related to **proanthocyanidin** derivatives
AUTHOR(S): McGraw, Gerald W.; Laks, Peter E.; Hemingway, Richard W.
CORPORATE SOURCE: Dep. Chem., Louisiana Coll., Pineville, LA, 71360, USA
SOURCE: Journal of Wood Chemistry and Technology (1988), 8(1), 91-109
CODEN: JWCTDJ; ISSN: 0277-3813
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Studies on the desulfonation of 2,4,6-trihydroxybenzylsulfonic acid (I) and Na epicatechin-(4.beta.)-sulfonate showed that sulfonates .alpha. to a phloroglucinol ring were good leaving groups at ambient temp. and pH >8.0. In contrast, hydroxybenzylsulfonic acids with resorcinol or phenol hydroxyl functionality resisted desulfonation even at pH 12 and 90.degree.. It was not possible to make (2,4,6-trihydroxyphenyl)(4-hydroxyphenyl)methane or (2,4,6-trihydroxyphenyl)(2,4-dihydroxyphenyl)methane by slow addn. of I to alk. solns. of phenol or resorcinol. However, facile desulfonation of I derivs. permitted the use of condensed tannins from most conifer barks as intermediates for the formulation of water-resistant, cold-setting, wood-laminating adhesives. Under typical adhesive formulation conditions, the sulfonic acid groups on tannin derivs. from conifer barks would be displaced, resulting in water-insol. polymers.
IT **114903-07-0**
RL: USES (Uses)
(disulfonation of model compds. for)

L20 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1986:28390 HCAPLUS
DOCUMENT NUMBER: 104:28390
TITLE: Structure and antiherpetic activity among the tannins
AUTHOR(S): Takechi, Masayuki; Tanaka, Yasuo; Takehara, Manabu; Nonaka, Genichiro; Nishioka, Itsuo
CORPORATE SOURCE: Fac. Pharm. Sci., Kinki Univ., Higashiosaka, Japan
SOURCE: Phytochemistry (Elsevier) (1985), 24(10), 2245-50
CODEN: PYTCAS; ISSN: 0031-9422
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In order to investigate the relationship between the antiherpetic activity and the structure of tannins, the activities of 38 such compds. were examd. The results indicate that the activities of hydroylzable tannins were dependent on the no. of galloyl or hexahydroxydiphenoyl groups and those of condensed ones on the degree of condensation. On the other hand,

the more active tannins were the more cytotoxic.

IT **12798-57-1 29106-49-8 37064-30-5**
76250-49-2 79907-44-1
RL: BIOL (Biological study)
(herpes virus-inhibitory activity and cytotoxicity of, structure in relation to)

L20 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1985:403803 HCAPLUS
DOCUMENT NUMBER: 103:3803
TITLE: Influence of culture age and spermidine treatment on the accumulation of phenolic compounds in suspension cultures
AUTHOR(S): Muhitch, Michael J.; Fletcher, John S.
CORPORATE SOURCE: Bot. Microbiol. Dep., Univ. Oklahoma, Norman, OK, 73019, USA
SOURCE: Plant Physiology (1985), 78(1), 25-8
CODEN: PLPHAY; ISSN: 0032-0889
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The influence of cell age on phenol accumulation was examd. by detg. the quantity of individual phenols which accumulated in Paul's scarlet rose cultures of increasing age. During log-phase growth (days 7 and 11), only gallic acid and **epicatechin**-catechin were detected, whereas during early and late stationary phase (days 14 and 35) several other phenols were present in addn. to gallic acid and **epicatechin** -catechin. When stationary-phase cultures were provided with a supplement of sucrose and spermidine, a treatment previously shown to arrest the senescence of rose cultures (Muhitch M.J.; Edwards, L.A.; Fletcher, G.L., 1983) the cells then accumulated a higher level and a wider assortment of phenols. Thus, extending the lifespan of mature nondividing cell cultures offers a means of increasing the yield of secondary products by cultured cells.
IT **76250-49-2P**
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in rose suspension culture, culture age and spermidine effect on)

L20 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1982:526863 HCAPLUS
DOCUMENT NUMBER: 97:126863
TITLE: Polymeric **proanthocyanidins**. Carbon-13 NMR studies of procyanidins
AUTHOR(S): Porter, Lawrence J.; Newman, Roger H.; Foo, L. Yeap; Wong, Herbert; Hemingway, Richard W.
CORPORATE SOURCE: Chem. Div., Dep. Sci. Ind. Res., Petone, N. Z.
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1982), (5), 1217-21
CODEN: JCPRB4; ISSN: 0300-922X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The 13C NMR spectra of 40 natural and synthetic **proanthocyanidins** , related flavan-3-ols, and their peracetate derivs. were fully assigned. The structures of the related polymers from Vicia sativa and Chaenomeles chinensis are discussed in terms of spectral correlations.
IT **12798-57-1 20315-25-7 29106-49-8**
37064-30-5 82245-99-6 82246-00-2
82894-95-9 82894-96-0
RL: PRP (Properties)
(NMR of carbon-13 of)

L20 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1981:44035 HCAPLUS
DOCUMENT NUMBER: 94:44035
TITLE: Novel biflavonoids, chalcan-flavan dimers from Gambir
AUTHOR(S): Nonaka, Genichiro; Nishioka, Itsuo
CORPORATE SOURCE: Fac. Pharm. Sci., Kyushu Univ., Fukuoka, 812, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1980), 28(10), 3145-9
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB The homologous series of novel chalcan-flavan dimers, gambiriin A1 (I), A2 (II), A3 (III), B1 (IV), B2 (V) and B3 (VI), along with a **proanthocyanidin** dimer, gambiriin C (epiafzelechin-catechin), were isolated from Gambir (Uncaria gambir). The structure elucidation of these chalcan-flavan dimers is reported, based on phys.-chem properties and derivatization.
IT **76236-92-5 76250-48-1 76250-49-2**
RL: BIOL (Biological study)
(Gambir biflavonoid, structure of)

L20 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1976:461371 HCAPLUS
DOCUMENT NUMBER: 85:61371
TITLE: Studies on beer haze formation. II. Dimeric flavanoids observed in profiles of beer: nylon 66 adsorbates
AUTHOR(S): Gracey, D. E. F.; Barker, R. L.
CORPORATE SOURCE: Beverage Sci. Dep., Labatt Brew. Canada Ltd., London, ON, Can.
SOURCE: Journal of the Institute of Brewing (1976), 82(2), 78-83
CODEN: JINBAL; ISSN: 0046-9750
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A peak in the gas chromatog. profile of beer: Nylon adsorbates has been found to comprise 3 unresolved biflavan components. One of these, mol. formula C30H26O12, consists of 2 C-C linked catechin units and has the same structure as a biflavan obtained by the acid catalyzed interaction between cyanidiol and catechin. It appears to be the same as the procyanidin previously isolated from beer. The other components, both with mol. formula C30H26O13, have the same skeletal structure as the 1st, but are linked catechin-gallocatechin pairs, one being a prodelphinidin, the other a procyanidin. Dicatechin [**20454-55-1**], a tannin obtained by treatment of catechin with dil. mineral acid, also seems likely to be a component of the adsorbate profiles.
IT **15514-06-4 20454-55-1**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(of beer)

L20 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1970:75613 HCAPLUS
DOCUMENT NUMBER: 72:75613
TITLE: Extractives of the mycorrhizas and roots of Pinus radiata and Pseudotsuga menziesii
AUTHOR(S): Ishikura, Nariyuki; Ishikura, N.
CORPORATE SOURCE: Div. Forest Prod., C.S.I.R.O., Melbourne, Australia
SOURCE: Australian Journal of Biological Sciences (1969), 22(6), 1425-36
CODEN: AJBSAM; ISSN: 0004-9417
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The amts. of acetone extractives from mycorrhizas and their polyphenolic portion were variable over a 6-month period. During August the amts. of extractives and polyphenols were higher in slow- than in fast-growing P. radiata seedlings. The amt. of extractives in the roots were greater than those in the mycorrhizas but in the latter the polyphenols were concd. in the outerlayer. The compn. of the mycorrhizal and root extractives of P. radiata were very similar and in addn. to resin contained catechin, 2 components that are very similar to 3,5,3',4'-tetrahydroxystilbene and one of its glucosides, and leuco-cyanidin polymers. The mycorrhizas of P. menziesii contain 15 components, including catechin, **epicatechin**, leucocyanidin polymers, and a polyene. With the exception of the latter the roots of P. menziesii contained the same components and in addn. poriolin, poriol, taxifolin, taxifolin-3-glucoside, and quercetin-3-glucoside. Evidence supports the view that the polyphenols are formed in situ and appear to be formed in enhanced amts. in the tannin layer of mycorrhizas. Their possible role in the establishment of mycorrhizas is discussed.

IT **490-46-0 14348-16-4**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(of Pseudotsuga menziesii)

L20 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1968:459534 HCAPLUS
DOCUMENT NUMBER: 69:59534
TITLE: Phenolic natural substances. IX. Diastereomeric catechin 3-glucosides and 3-gallates
AUTHOR(S): Weinges, Klaus; Seiler, Dieter
CORPORATE SOURCE: Univ. Heidelberg, Heidelberg, Fed. Rep. Ger.
SOURCE: Justus Liebigs Annalen der Chemie (1968), 714, 193-204
CODEN: JLACBF; ISSN: 0075-4617
DOCUMENT TYPE: Journal
LANGUAGE: German

AB The partial acetylation of natural (+)-catechol (I) and (-)-epicatechol gave 3',4',5,7-tetra-O-acetyl-(+)-catechol and 3',4',5,7-tetra-O-acetyl(-)-epicatechol, resp., which treated with tetra-O-acetyl-.alpha.-D-glucopyranosyl bromide gave peracetylated 3-D-glucopyranosides. The latter upon sapon. yielded (+)-catechol 3-D-glucopyranoside and (-)-epicatechol 3-D-glucopyranoside, resp. Similarly were prepd. (+)-catechol 3-gallate and (-)-epicatechol 3-gallate. The benzylation of I gave 3',4',5,7-tetra-O-benzyl-(+)-catechol and 8-benzyl-3',4',5,7-tetra-O-benzyl-(+)-catechol. The latter gave upon hydrogenolysis 8-benzyl-(+)-catechol, a model compd. for **proanthocyanidins** isolated from fruits.

IT **20728-79-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L20 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1963:66387 HCAPLUS
DOCUMENT NUMBER: 58:66387
ORIGINAL REFERENCE NO.: 58:11319g-h,11320a-e
TITLE: Acid-catalyzed autocondensation of hydroxyflavans. Condensed **proanthocyanidins**
AUTHOR(S): Freudenberg, K.; Weinges, K.
CORPORATE SOURCE: Univ. Heidelberg, Germany
SOURCE: Tetrahedron Letters (1962) 1073-6
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: German

GI For diagram(s), see printed CA Issue.

AB cf. CA 52, 11831d. Self-condensation of catechol (I) (loc. cit.) gave the dimer (II), converted to the undecaacetate, m. 221-3.degree..

Condensation in very dil. hot acid according to Mayer and Merger (CA 55, 27256h) gave a product (III or IV) contg. 1 mol. H2O less than II. Repetition of the self-condensation in the cold or heating I in dil. AcOH gave II together with a trace of III (or IV). II together with III (or IV) was found in block gambier with II prevalent. Pure II treated with hot dil. acid gave III (or IV) together with traces of I. Tetramethylcatechol condensed by heating with 1,3,5-(HO)3-C6H3 gave the methylated deriv. of the condensation product (V or VI) prepd. by condensation of 1,3,5-(HO)3C6H3 with I according to M. and M. (CA 55, 24633a). Self-condensation of I at 90.degree. in very dil. acid at pH 4 60 hrs. gave 2:3 II-III (or IV), together with many other products. Under the previously described conditions in the cold no epimerization of I occurred. Self-condensation of 4' 7-dihydroxyflavan (VII) in cold acid took place with an increase in OH groups but no dimer was isolated on account of the rapid formation of high-mol.-wt. products. VII in 1:1 pure dioxane-0.2N HCl kept 4 days at 20.degree. with total disappearance of VII (paper chromatogram), and the condensate (VIII.) acetylated gave a cryst. acetate, m. 137-8.degree., taken up in MeOH and treated with CH2N2 in Et2O to give the corresponding cryst. hexamethyl ether, m. 102-4.degree.. The findings did not confirm the proposed rearrangement. The previously described condensed **proanthocyanidin** (IX) (CA 55, 24730i) from Cratae-gus oxyacantha gave a decaacetate and an octamethyl ether with 2 OH groups susceptible to acetylation. IX agreed in Rf values in various solvents and in infrared spectrum with that of a compd. obtained by Forsyth and Roberts (CA 53, 1318i) from cacao beans. A proposed formula for IV with open half-ketal linkages is not preferable to the previously proposed closed ketol formulation.

IT **96554-19-7**, 6-Chromanethanol, .beta.,2-bis(3,4-dihydroxyphenyl)-3,5,7-trihydroxy-.alpha.-(2,4,6-trihydroxybenzyl)- **107895-54-5**, 3,3',4',5,7-Flavanpentol, 6-[.alpha.-(2,3-dihydro-4,6-dihydroxy-2-benzofuranyl)-3,4-dihydroxybenzyl]-
(prepn. of)

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=> select hit rn 120 1-19
E1 THROUGH E63 ASSIGNED

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=> fil reg
FILE 'REGISTRY' ENTERED AT 09:19:16 ON 23 SEP 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 22 SEP 2003 HIGHEST RN 591204-55-6
DICTIONARY FILE UPDATES: 22 SEP 2003 HIGHEST RN 591204-55-6

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP

PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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(FILE 'HCAPLUS' ENTERED AT 09:18:50 ON 23 SEP 2003)
SELECT HIT RN L20 1-19

FILE 'REGISTRY' ENTERED AT 09:19:16 ON 23 SEP 2003
L21 52 S E1-E63 AND L7

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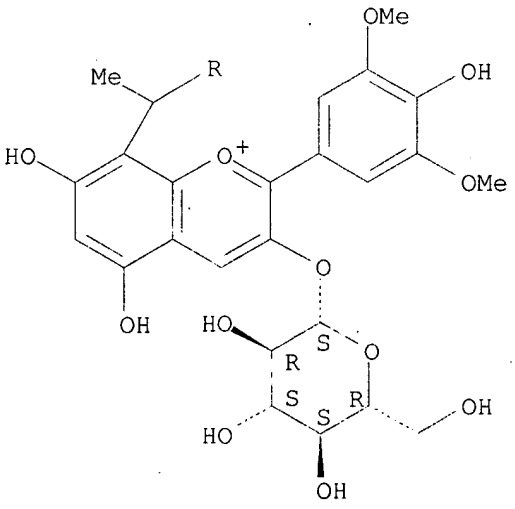
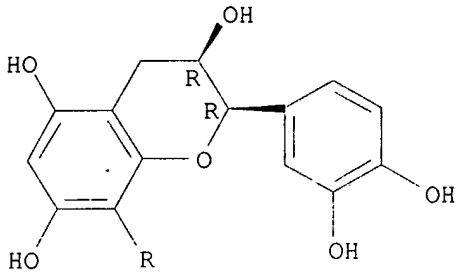
L21 ANSWER 1 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **439791-73-8** REGISTRY
CN 1-Benzopyrylium, 8-[1-[(2R,3R)-2-(3,4-dihydroxyphenyl)-3,4-dihydro-3,5,7-trihydroxy-2H-1-benzopyran-8-yl]ethyl]-3-(.beta.-D-glucopyranosyloxy)-5,7-dihydroxy-2-(4-hydroxy-3,5-dimethoxyphenyl)-, chloride (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C40 H41 O18 . Cl
SR CA
LC STN Files: CA, CAPLUS
CRN (220991-11-7)

Absolute stereochemistry.

PAGE 1-A



PAGE 2-A



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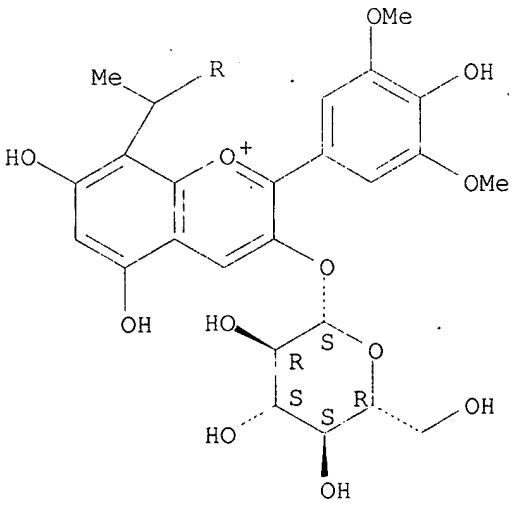
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:62456

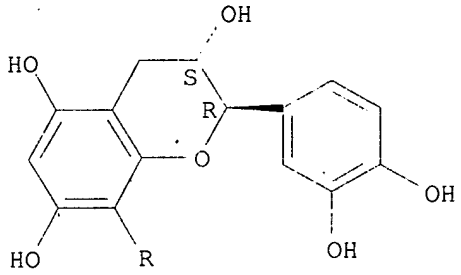
L21 ANSWER 2 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **189073-31-2** REGISTRY
CN 1-Benzopyrylium, 8-[1-[(2R,3S)-2-(3,4-dihydroxyphenyl)-3,4-dihydro-3,5,7-trihydroxy-2H-1-benzopyran-8-yl]ethyl]-3-(.beta.-D-glucopyranosyloxy)-5,7-dihydroxy-2-(4-hydroxy-3,5-dimethoxyphenyl)-, chloride (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C40 H41 O18 . Cl
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

PAGE 1-A



PAGE 2-A



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4 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:384353

REFERENCE 2: 138:220639

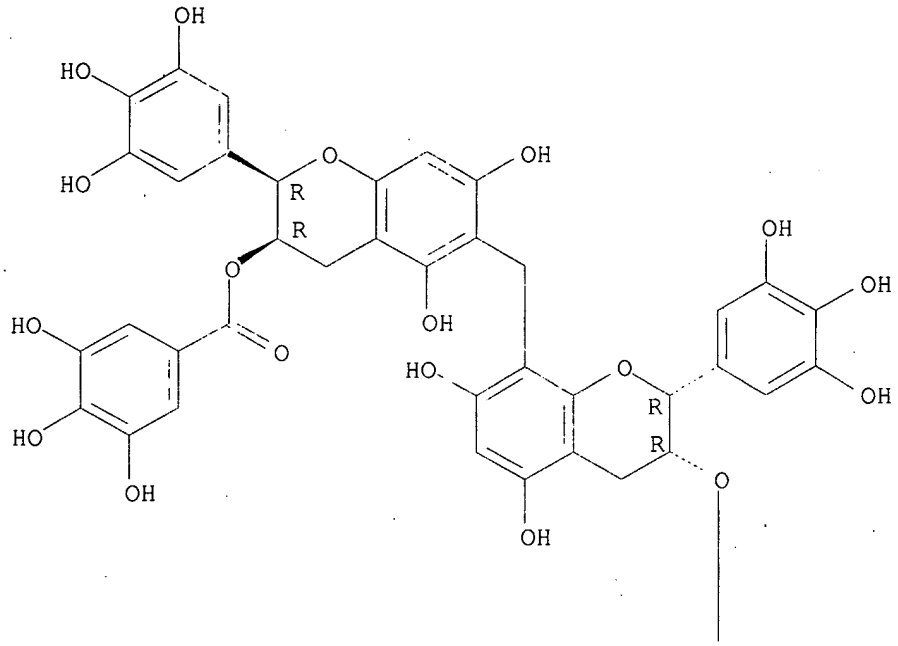
REFERENCE 3: 137:62456

REFERENCE 4: 126:292581

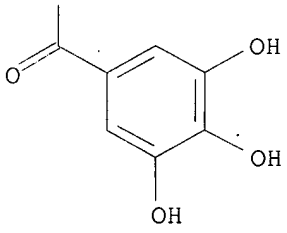
L21 ANSWER 3 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **176107-91-8** REGISTRY
CN Benzoic acid, 3,4,5-trihydroxy-, 6-[[3,4-dihydro-5,7-dihydroxy-3-[(3,4,5-trihydroxybenzoyl)oxy]-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-8-yl]methyl]-3,4-dihydro-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-3-yl ester, [2R-[2.alpha.,3.alpha.,6(2R*,3R*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C45 H36 O22
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

PAGE 1-A



PAGE 2-A



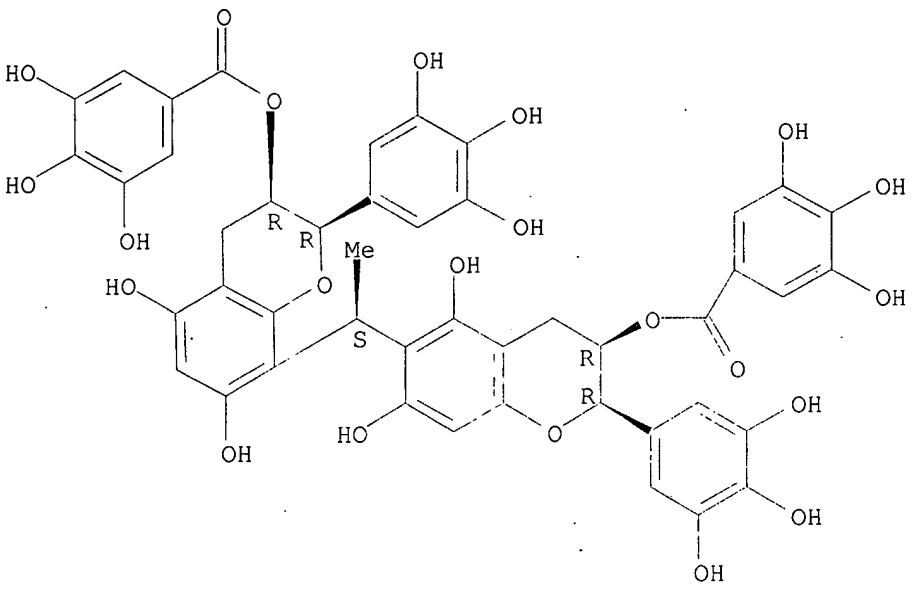
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 124:331679

L21 ANSWER 4 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **159702-16-6** REGISTRY
CN Benzoic acid, 3,4,5-trihydroxy-, 6-[1-[3,4-dihydro-5,7-dihydroxy-3-[(3,4,5-trihydroxybenzoyl)oxy]-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-8-yl]ethyl]-3,4-dihydro-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-3-yl ester, [2R-[2.alpha.,3.alpha.,6[S*(2R*,3R*)]]]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 6,8'-(S)-(Ethane-1,1-diyl)diepigallocatechin 3,3'-di-O-gallate
FS STEREOSEARCH
MF C46 H38 O22
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



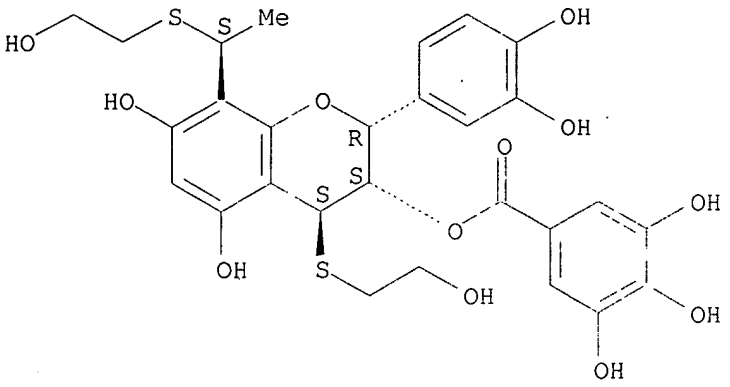
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:30169

L21 ANSWER 5 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **159663-15-7** REGISTRY
CN Benzoic acid, 3,4,5-trihydroxy-, 2-(3,4-dihydroxyphenyl)-3,4-dihydro-5,7-dihydroxy-4-[(2-hydroxyethyl)thio]-8-[1-[(2-hydroxyethyl)thio]ethyl]-2H-1-benzopyran-3-yl ester, [2R-[2.alpha.,3.alpha.,4.beta.,8(S*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C28 H30 O12 S2
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



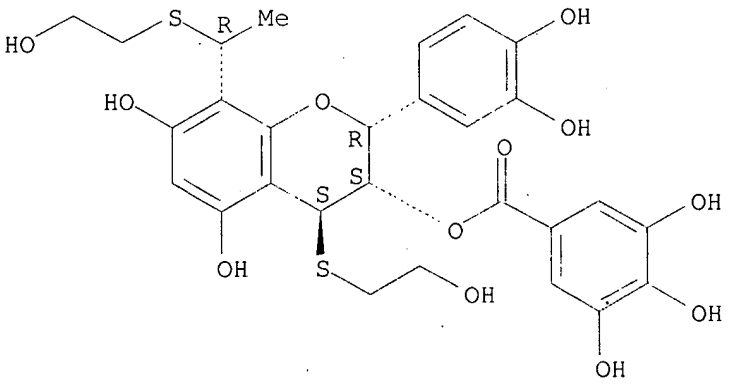
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:30169

L21 ANSWER 6 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **159663-14-6** REGISTRY
CN Benzoic acid, 3,4,5-trihydroxy-, 2-(3,4-dihydroxyphenyl)-3,4-dihydro-5,7-dihydroxy-4-[(2-hydroxyethyl)thio]-8-[1-[(2-hydroxyethyl)thio]ethyl]-2H-1-benzopyran-3-yl ester, [2R-[2.alpha.,3.alpha.,4.beta.,8(R*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C28 H30 O12 S2
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

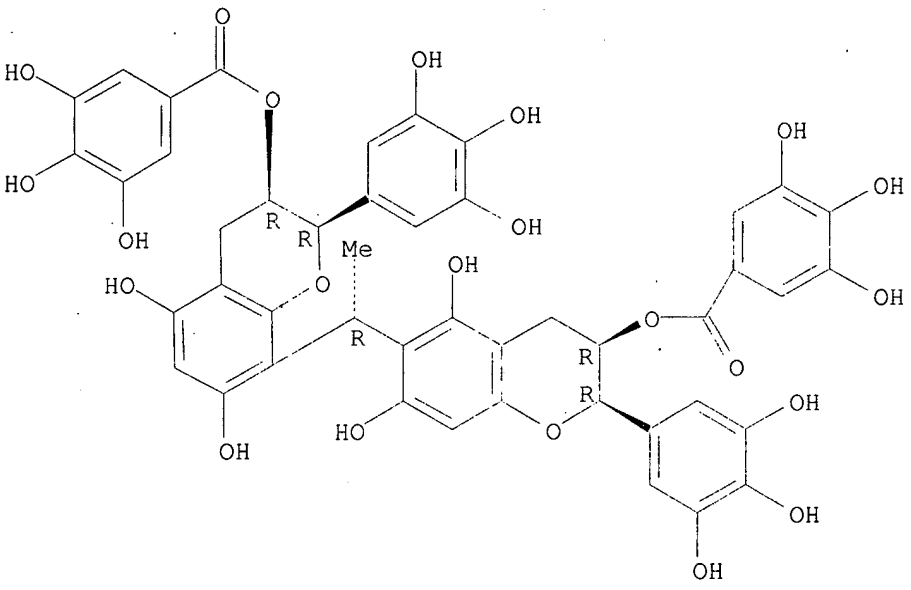
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:30169

L21 ANSWER 7 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN

RN **159663-13-5** REGISTRY
CN Benzoic acid, 3,4,5-trihydroxy-, 6-[1-[3,4-dihydro-5,7-dihydroxy-3-[(3,4,5-trihydroxybenzoyl)oxy]-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-8-yl]ethyl]-3,4-dihydro-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-3-yl ester, [2R-[2.alpha.,3.alpha.,6[R*(2R*,3R*)]]]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 6,8'-(R)-(Ethane-1,1-diyl)diepigallocatechin 3,3'-di-O-gallate
FS STEREOSEARCH
MF C46 H38 O22
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



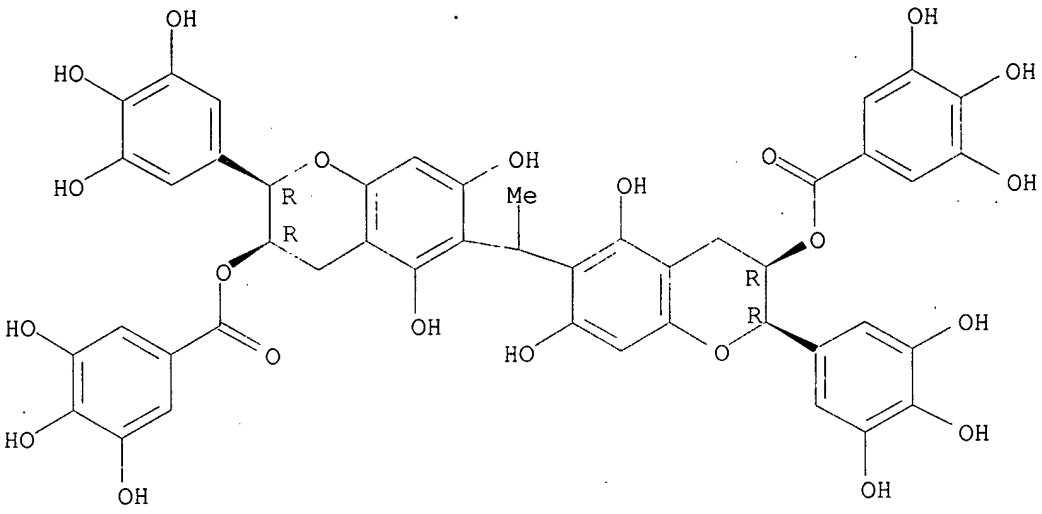
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:30169

L21 ANSWER 8 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **159663-12-4** REGISTRY
CN Benzoic acid, 3,4,5-trihydroxy-, ethylidenebis[3,4-dihydro-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-6,3-diyl] ester, [2R-[2.alpha.,3.alpha.,6(2R*,3R*)]]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN (-)-6,6'-(Ethane-1,1-diyl)diepigallocatechin 3,3'-di-O-gallate
FS STEREOSEARCH
MF C46 H38 O22
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



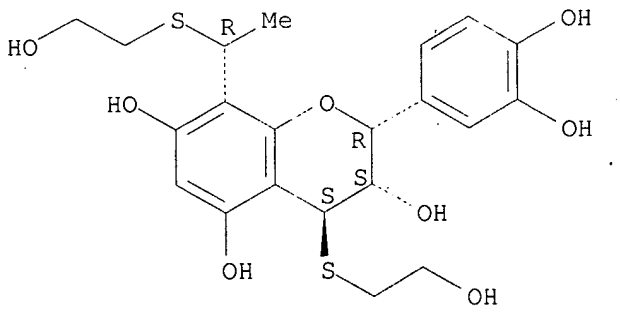
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:30169

L21 ANSWER 9 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **159663-11-3** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-3,4-dihydro-4-[(2-hydroxyethyl)thio]-8-[1-[(2-hydroxyethyl)thio]ethyl]-, [2R-[2.alpha.,3.alpha.,4.beta.,8(R*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H26 O8 S2
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

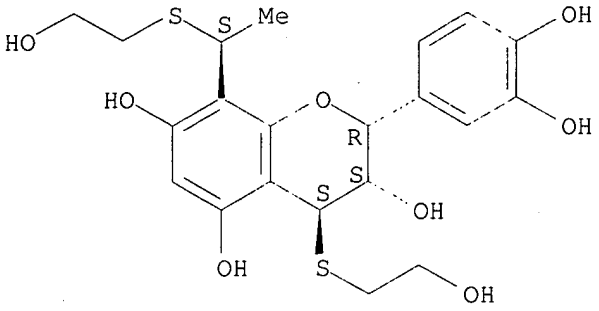
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:30169

L21 ANSWER 10 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN

RN **159663-10-2** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-3,4-dihydro-4-[(2-hydroxyethyl)thio]-8-[1-[(2-hydroxyethyl)thio]ethyl]-, [2R-[2.alpha.,3.alpha.,4.beta.,8(S*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H26 O8 S2
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



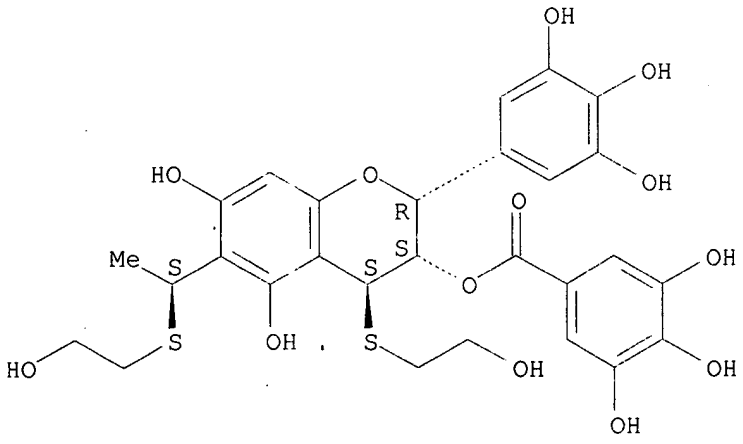
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:30169

L21 ANSWER 11 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **159663-09-9** REGISTRY
CN Benzoic acid, 3,4,5-trihydroxy-, 3,4-dihydro-5,7-dihydroxy-4-[(2-hydroxyethyl)thio]-6-[1-[(2-hydroxyethyl)thio]ethyl]-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-3-yl ester, [2R-[2.alpha.,3.alpha.,4.beta.,6(S*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C28 H30 O13 S2
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



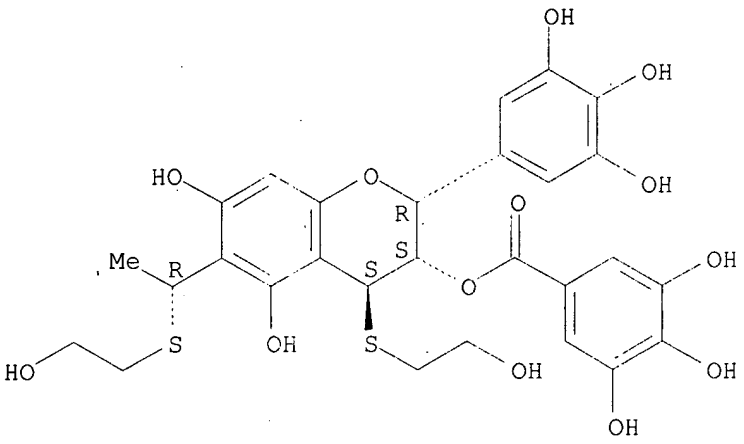
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:30169

L21 ANSWER 12 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **159663-08-8** REGISTRY
CN Benzoic acid, 3,4,5-trihydroxy-, 3,4-dihydro-5,7-dihydroxy-4-[(2-hydroxyethyl)thio]-6-[1-[(2-hydroxyethyl)thio]ethyl]-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-3-yl ester, [2R-[2.alpha.,3.alpha.,4.beta.,6(R*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C28 H30 O13 S2
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



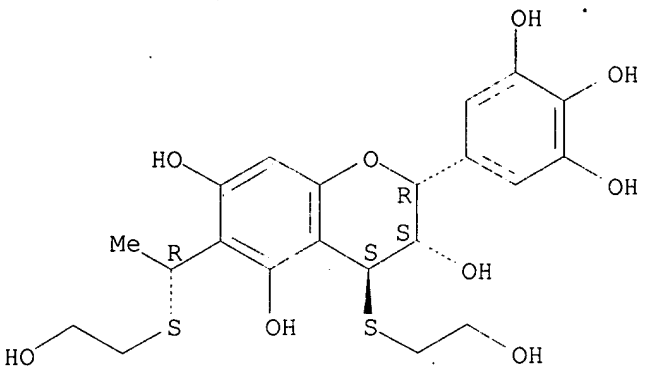
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:30169

L21 ANSWER 13 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **159663-07-7** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 3,4-dihydro-4-[(2-hydroxyethyl)thio]-6-[1-[(2-hydroxyethyl)thio]ethyl]-2-(3,4,5-trihydroxyphenyl)-, [2R-[2.alpha.,3.alpha.,4.beta.,6(R*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H26 O9 S2
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



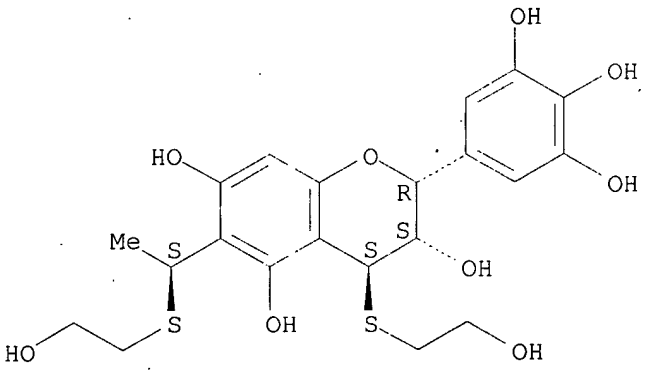
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:30169

L21 ANSWER 14 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **159663-06-6** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 3,4-dihydro-4-[(2-hydroxyethyl)thio]-6-[1-[(2-hydroxyethyl)thio]ethyl]-2-(3,4,5-trihydroxyphenyl)-, [2R-[2.alpha.,3.alpha.,4.beta.,6(S*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H26 O9 S2
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

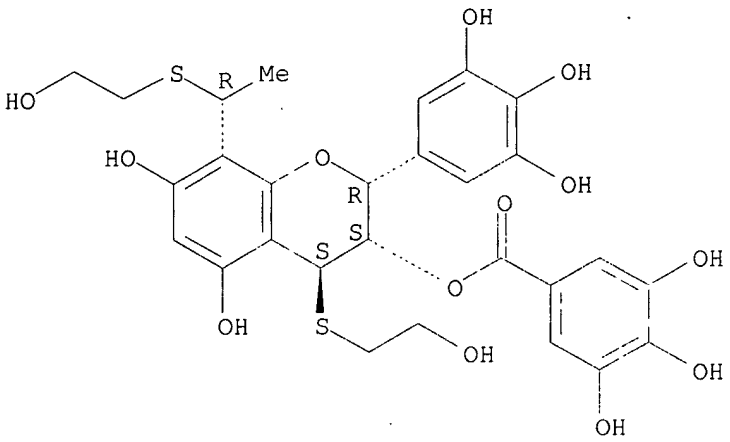
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:30169

L21 ANSWER 15 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **159663-05-5** REGISTRY
CN Benzoic acid, 3,4,5-trihydroxy-, 3,4-dihydro-5,7-dihydroxy-4-[(2-hydroxyethyl)thio]-8-[1-[(2-hydroxyethyl)thio]ethyl]-2-(3,4,5-

trihydroxyphenyl)-2H-1-benzopyran-3-yl ester, [2R-[2.alpha.,3.alpha.,4.beta.,8(R*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C28 H30 O13 S2
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



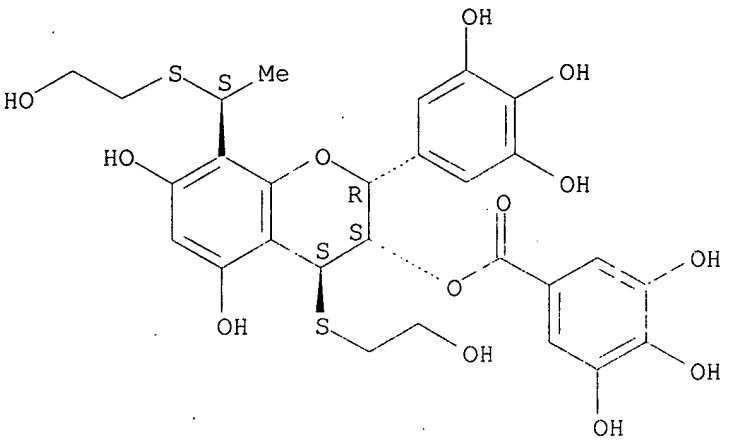
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:30169

L21 ANSWER 16 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **159663-04-4** REGISTRY
CN Benzoic acid, 3,4,5-trihydroxy-, 3,4-dihydro-5,7-dihydroxy-4-[(2-hydroxyethyl)thio]-8-[1-[(2-hydroxyethyl)thio]ethyl]-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-3-yl ester, [2R-[2.alpha.,3.alpha.,4.beta.,8(S*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C28 H30 O13 S2
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



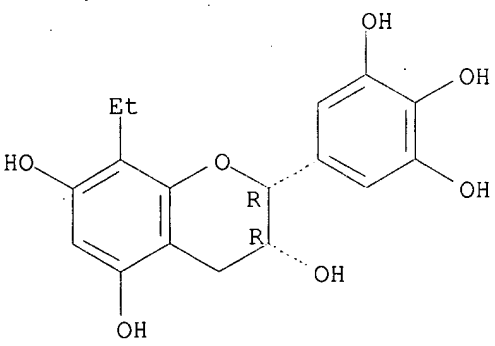
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:30169

L21 ANSWER 17 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **159663-03-3** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 8-ethyl-3,4-dihydro-2-(3,4,5-trihydroxyphenyl)-, (2R-cis)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H18 O7
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

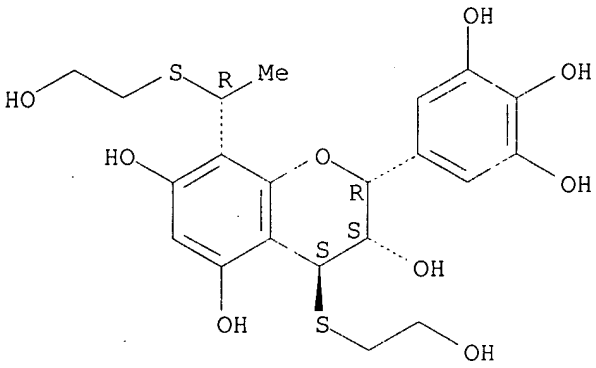
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:30169

L21 ANSWER 18 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **159663-02-2** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 3,4-dihydro-4-[(2-hydroxyethyl)thio]-8-[1-[(2-

hydroxyethyl)thio]ethyl]-2-(3,4,5-trihydroxyphenyl)-, [2R-[2.alpha.,3.alpha.,4.beta.,8(R*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H26 O9 S2
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



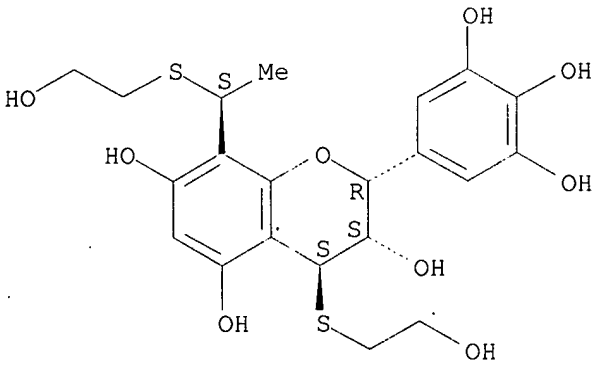
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:30169

L21 ANSWER 19 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **159663-01-1** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 3,4-dihydro-4-[(2-hydroxyethyl)thio]-8-[1-[(2-hydroxyethyl)thio]ethyl]-2-(3,4,5-trihydroxyphenyl)-, [2R-[2.alpha.,3.alpha.,4.beta.,8(S*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H26 O9 S2
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:30169

L21 ANSWER 20 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **154524-52-4** REGISTRY
CN D-Glucitol, 1-C-[(2R,3R)-2-(3,4-dihydroxyphenyl)-3,4-dihydro-3,5,7-trihydroxy-2H-1-benzopyran-6-yl]-, cyclic 2,3:4,6-bis[(1S)-4,4',5,5',6,6'-hexahydroxy[1,1'-biphenyl]-2,2'-dicarboxylate], (1S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 7H-Dibenzo[g,i][1,5]dioxacycloundecin, D-glucitol deriv.
CN D-Glucitol, 1-C-[2-(3,4-dihydroxyphenyl)-3,4-dihydro-3,5,7-trihydroxy-2H-1-benzopyran-6-yl]-, cyclic 2,3:4,6-bis(4,4',5,5',6,6'-hexahydroxy[1,1'-biphenyl]-2,2'-dicarboxylate), [1S(2R,3R),2(S),4(S)]-
CN Dibenzo[f,h][1,4]dioxecin, D-glucitol deriv.
OTHER NAMES:
CN Camelliatannin C
MF C49 H38 O28
SR CA
LC STN Files: CA, CAPLUS

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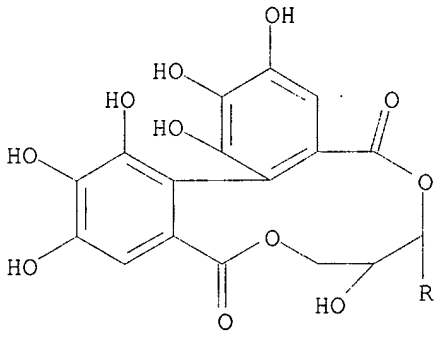

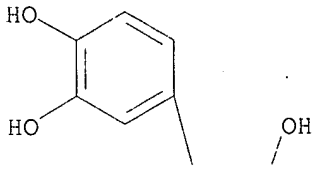

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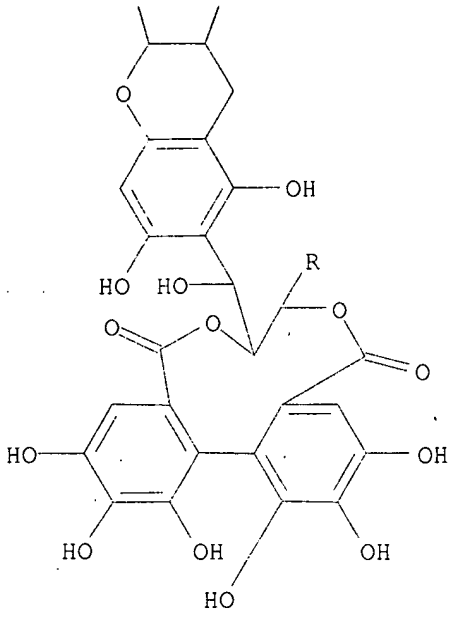


3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

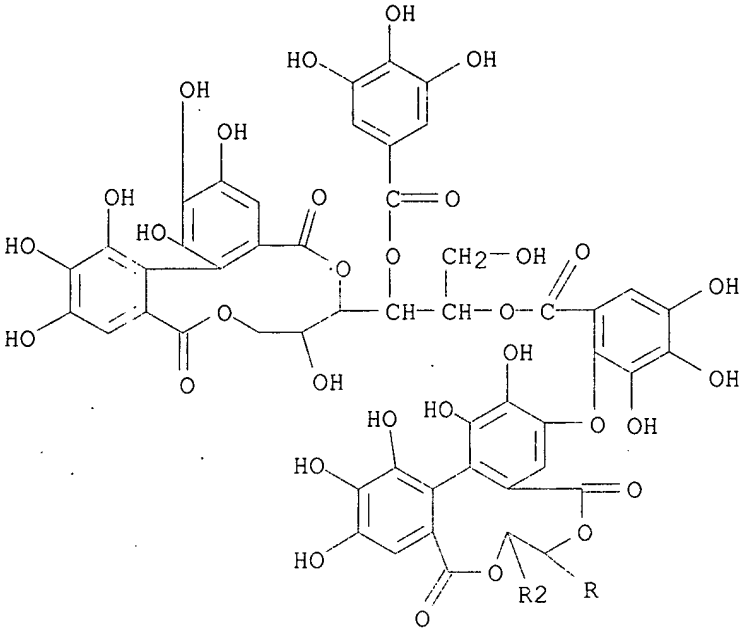
REFERENCE 1: 124:25626

REFERENCE 2: 121:57793

REFERENCE 3: 120:253139

L21 ANSWER 21 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **153235-02-0** REGISTRY
CN D-Glucitol, 1-C-[2-(3,4-dihydroxyphenyl)-3,4-dihydro-3,5,7-trihydroxy-2H-1-benzopyran-8-yl]-, cyclic 2.fwdarw.2:3.fwdarw.2'-[4-(6-carboxy-2,3,4-trihydroxyphenoxy)-4',5,5',6,6'-pentahydroxy[1,1'-biphenyl]-2,2'-dicarboxylate], 2-ester with D-glucitol cyclic 4,6-(4,4',5,5',6,6'-hexahydroxy[1,1'-biphenyl]-2,2'-dicarboxylate) 3-(3,4,5-trihydroxybenzoate), [1S(2R,3R),2[S(S)]]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 7H-Dibenzo[g,i][1,5]dioxacycloundecin, D-glucitol deriv.
CN Dibenzo[f,h][1,4]dioxecin, D-glucitol deriv.
MF C69 H58 O42
SR CA
LC STN Files: CA, CAPLUS

PAGE 1-A



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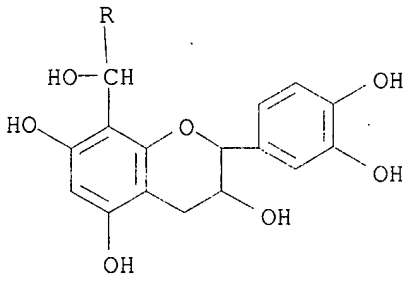

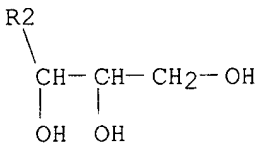

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 120:253139

L21 ANSWER 22 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **148159-87-9** REGISTRY
CN D-Glucose, cyclic 4,6-[(1S)-4,4',5,5',6,6'-hexahydroxy[1,1'-biphenyl]-2,2'-dicarboxylate] 3-(3,4,5-trihydroxybenzoate), 2-ester with 1-C-[(2R,3R)-2-(3,4-dihydroxyphenyl)-3,4-dihydro-3,5,7-trihydroxy-2H-1-benzopyran-8-yl]-D-glucitol cyclic 2.fwdarw.2:3.fwdarw.2'-[(1S)-4-(6-carboxy-2,3,4-trihydroxyphenoxy)-4',5,5',6,6'-pentahydroxy[1,1'-biphenyl]-

2,2'-dicarboxylate] cyclic 4,6-[(1S)-4,4',5,5',6,6'-hexahydroxy[1,1'-biphenyl]-2,2'-dicarboxylate] (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 7H-Dibenzo[g,i][1,5]dioxacycloundecin, D-glucose deriv.
CN D-Glucose, cyclic 4,6-(4,4',5,5',6,6'-hexahydroxy[1,1'-biphenyl]-2,2'-dicarboxylate) 3-(3,4,5-trihydroxybenzoate), 2-ester with 1-C-[2-(3,4-dihydroxyphenyl)-3,4-dihydro-3,5,7-trihydroxy-2H-1-benzopyran-8-yl]-D-glucitol cyclic 2.fwdarw.2:3.fwdarw.2'-[4-(6-carboxy-2,3,4-trihydroxyphenoxy)-4',5,5',6,6'-pentahydroxy[1,1'-biphenyl]-2,2'-dicarboxylate] cyclic 4,6-(4,4',5,5',6,6'-hexahydroxy[1,1'-biphenyl]-2,2'-dicarboxylate), stereoisomer
CN Dibenzo[f,h][1,4]dioxecin, D-glucose deriv.
OTHER NAMES:
CN Camelliatannin D
MF C83 H62 O50
SR CA
LC STN Files: CA, CAPLUS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 124:21761

REFERENCE 2: 121:57793

REFERENCE 3: 120:253139

REFERENCE 4: 119:117629

L21 ANSWER 23 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **148132-92-7** REGISTRY
CN D-Glucitol, 1-C-[(2R,3R)-2-(3,4-dihydroxyphenyl)-3,4-dihydro-3,5,7-trihydroxy-2H-1-benzopyran-8-yl]-, cyclic 2,3:4,6-bis[(1S)-4,4',5,5',6,6'-hexahydroxy[1,1'-biphenyl]-2,2'-dicarboxylate], (1S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 7H-Dibenzo[g,i][1,5]dioxacycloundecin, D-glucitol deriv.
CN D-Glucitol, 1-C-[2-(3,4-dihydroxyphenyl)-3,4-dihydro-3,5,7-trihydroxy-2H-1-benzopyran-8-yl]-, cyclic 2,3:4,6-bis(4,4',5,5',6,6'-hexahydroxy[1,1'-biphenyl]-2,2'-dicarboxylate), [1S(2R,3R),2(S),4(S)]-
CN Dibenzo[f,h][1,4]dioxecin, D-glucitol deriv.
OTHER NAMES:
CN Camelliatannin E
MF C49 H38 O28
SR CA
LC STN Files: CA, CAPLUS

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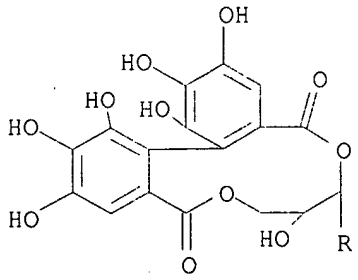
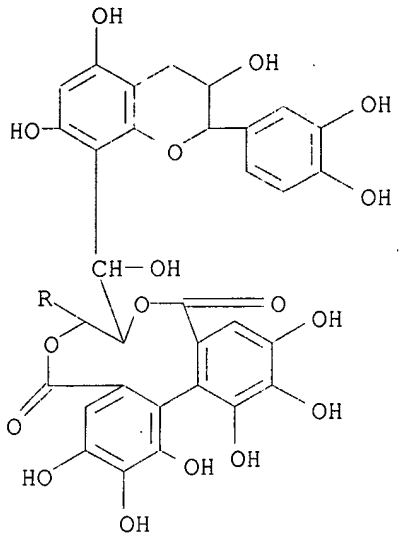


PAGE 2-A



4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 124:25626

REFERENCE 2: 121:57793

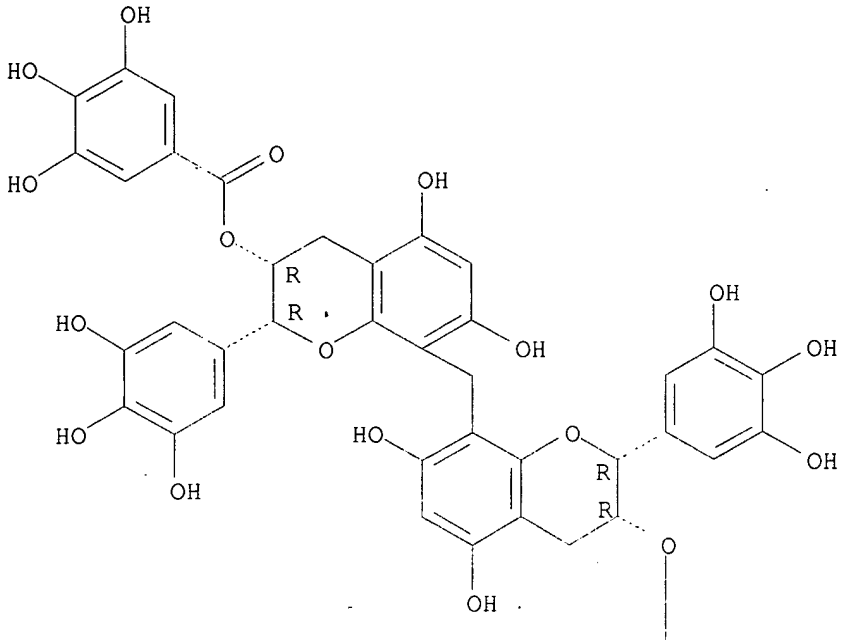
REFERENCE 3: 120:253139

REFERENCE 4: 119:117629

L21 ANSWER 24 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **126737-60-8** REGISTRY
CN Benzoic acid, 3,4,5-trihydroxy-, methylenebis[(2R,3R)-3,4-dihydro-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-8,3-diyl] ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, 3,4,5-trihydroxy-, methylenebis[3,4-dihydro-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-8,3-diyl] ester, [2R-[2.alpha.,3.alpha.,8(2R*,3R*)]]-
OTHER NAMES:
CN (-)-Oolonghomobisflavan A
CN Oolonghomobisflavan A
FS STEREOSEARCH
MF C45 H36 O22
SR CA
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAPLUS, NAPRALERT
(*File contains numerically searchable property data)

Absolute stereochemistry.

PAGE 1-A



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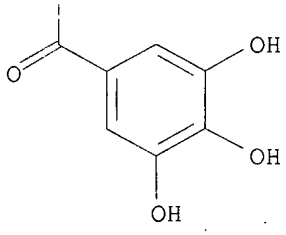


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:367880

REFERENCE 2: 131:2076

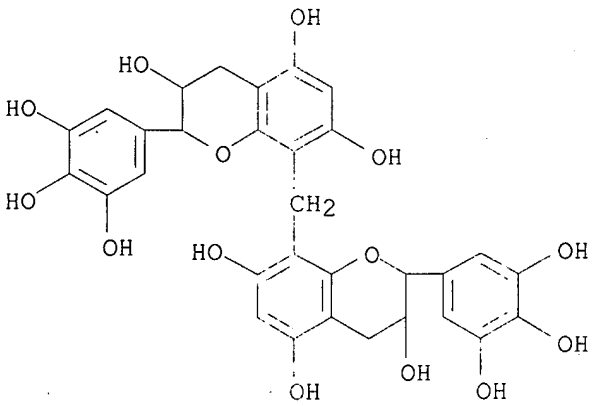
REFERENCE 3: 124:331679

REFERENCE 4: 120:128300

REFERENCE 5: 112:196860

L21 ANSWER 25 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **126716-09-4** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 8,8'-methylenebis[3,4-dihydro-2-(3,4,5-trihydroxyphenyl)-, (2R,2'R,3R,3'R)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:

CN 2H-1-Benzopyran-3,5,7-triol, 8,8'-methylenebis[3,4-dihydro-2-(3,4,5-trihydroxyphenyl)-, [2R-[2.alpha.,3.alpha.,8(2'R*,3'R*)]]-
OTHER NAMES:
CN Didesgalloyloolonghomobisflavan A
MF C31 H28 O14
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

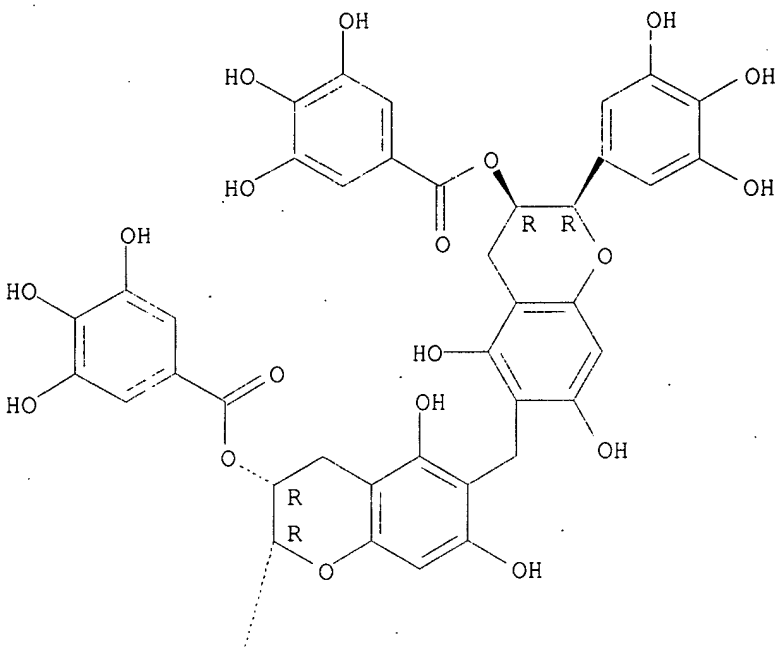
REFERENCE 1: 138:367880

REFERENCE 2: 112:196860

L21 ANSWER 26 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **126716-06-1** REGISTRY
CN Benzoic acid, 3,4,5-trihydroxy-, methylenebis[(2R,3R)-3,4-dihydro-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-6,3-diyl] ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, 3,4,5-trihydroxy-, methylenebis[3,4-dihydro-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-6,3-diyl] ester, [2R-[2.alpha.,3.alpha.,6(2R*,3R*)]]-
OTHER NAMES:
CN Oolonghomobisflavan C
FS STEREOSEARCH
MF C45 H36 O22
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.

PAGE 1-A



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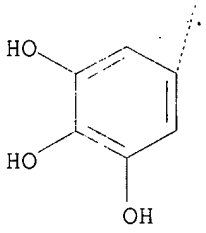


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

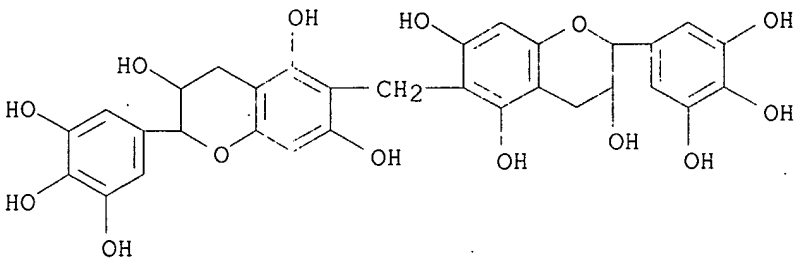
3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 133:172213

REFERENCE 2: 124:331679

REFERENCE 3: 112:196860

L21 ANSWER 27 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **126716-04-9** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 6,6'-methylenebis[3,4-dihydro-2-(3,4,5-trihydroxyphenyl)-, [2R-[2.alpha.,3.alpha.,6(2R*,3R*)]]- (9CI) (CA INDEX NAME)
MF C31 H28 O14
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)

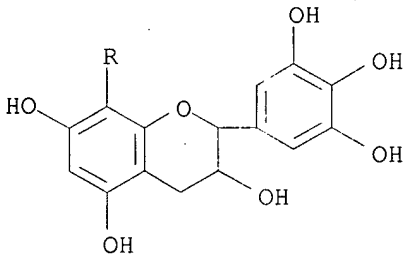


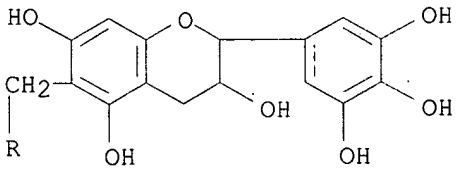
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 112:196860

L21 ANSWER 28 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **126716-02-7** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 6-[[3,4-dihydro-3,5,7-trihydroxy-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-8-yl]methyl]-3,4-dihydro-2-(3,4,5-trihydroxyphenyl)-, [2R-[2.alpha.,3.alpha.,6(2R*,3R*)]]- (9CI) (CA INDEX NAME)
MF C31 H28 O14
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)





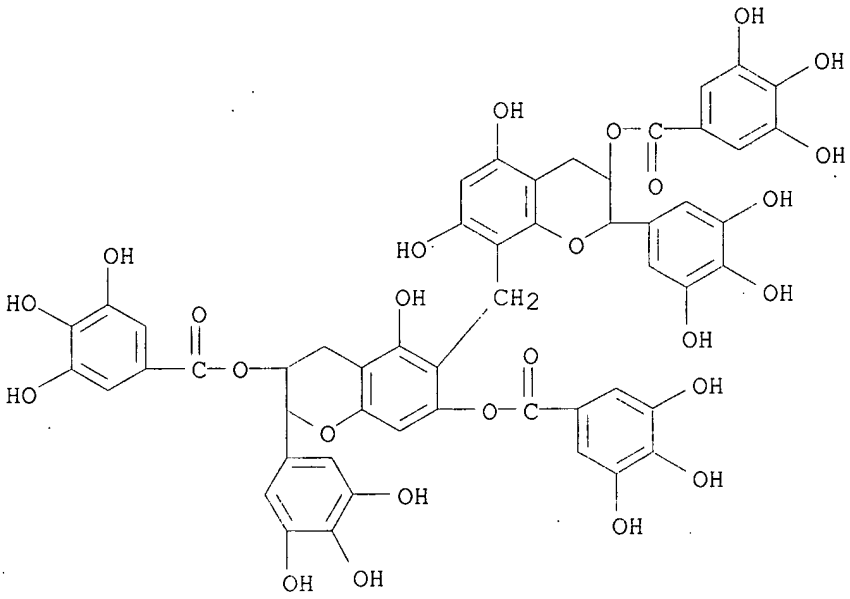
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 112:196860

L21 ANSWER 29 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **126715-88-6** REGISTRY

CN Benzoic acid, 3,4,5-trihydroxy-, (2R,3R)-6-[[(2R,3R)-3,4-dihydro-5,7-dihydroxy-3-[(3,4,5-trihydroxybenzoyl)oxy]-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-8-yl]methyl]-3,4-dihydro-5-hydroxy-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-3,7-diyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, 3,4,5-trihydroxy-, 6-[[3,4-dihydro-5,7-dihydroxy-3-[(3,4,5-trihydroxybenzoyl)oxy]-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-8-yl]methyl]-3,4-dihydro-5-hydroxy-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-3,7-diyl ester, [2R-[2.alpha.,3.alpha.,6(2R*,3R*)]]-
OTHER NAMES:
CN Oolonghomobisflavan B
MF C52 H40 O26
SR CA
LC STN Files: CA, CAPLUS, NAPRALERT

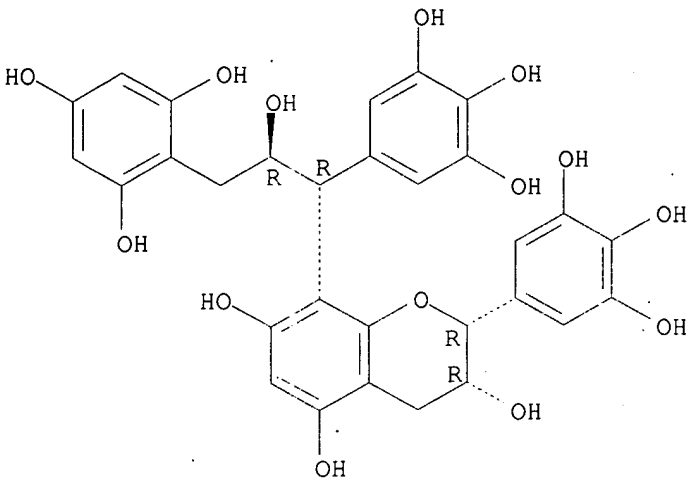


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 112:196860

L21 ANSWER 30 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **121844-29-9** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 3,4-dihydro-8-[2-hydroxy-1-(3,4,5-trihydroxyphenyl)-3-(2,4,6-trihydroxyphenyl)propyl]-2-(3,4,5-trihydroxyphenyl)-, [2R-[2.alpha.,3.alpha.,8(1R*,2R*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C30 H28 O14
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 111:76723

L21 ANSWER 31 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **121844-27-7** REGISTRY
CN Benzoic acid, 3,4,5-trihydroxy-, (1R,2R)-2-[(2R,3R)-3,4-dihydro-5,7-dihydroxy-3-[(3,4,5-trihydroxybenzoyl)oxy]-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-8-yl]-2-(3,4,5-trihydroxyphenyl)-1-[(2,4,6-trihydroxyphenyl)methyl]ethyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, 3,4,5-trihydroxy-, 2-[3,4-dihydro-5,7-dihydroxy-3-[(3,4,5-trihydroxybenzoyl)oxy]-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-8-yl]-2-(3,4,5-trihydroxyphenyl)-1-[(2,4,6-trihydroxyphenyl)methyl]ethyl ester, [2R-[2.alpha.,3.alpha.,8(1R*,2R*)]]-
OTHER NAMES:
CN (-)-Assamicain B
CN Assamicain B
FS STEREOSEARCH
MF C44 H36 O22
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, NAPRALERT
(*File contains numerically searchable property data)

Absolute stereochemistry.

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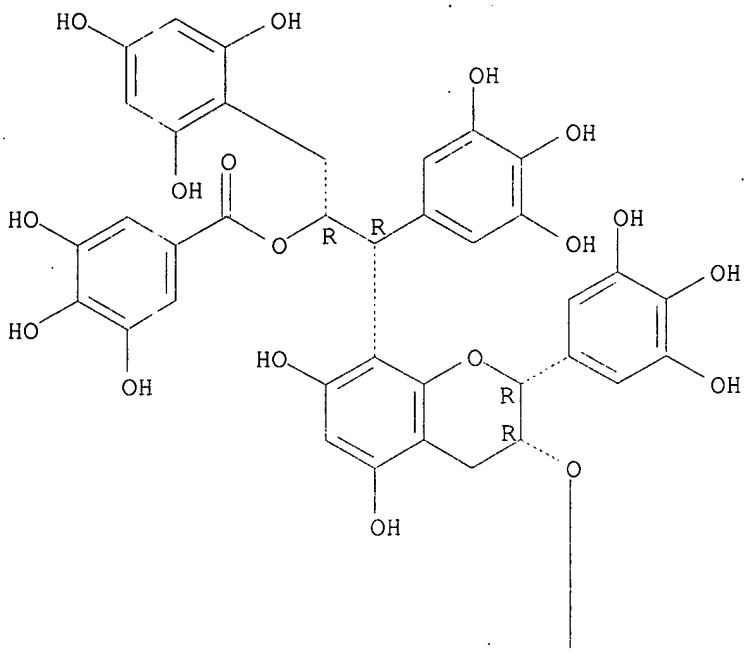

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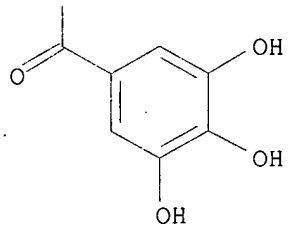


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:367880

REFERENCE 2: 124:331679

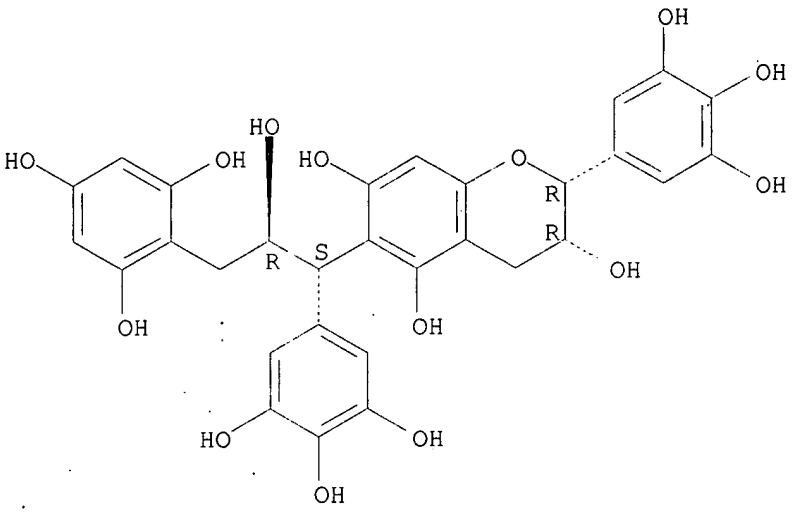
REFERENCE 3: 120:128300

REFERENCE 4: 111:76723

L21 ANSWER 32 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **121795-72-0** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 3,4-dihydro-6-[2-hydroxy-3-(2,4,6-trihydroxyphenyl)-1-(3,4,5-trihydroxyphenyl)propyl]-2-(3,4,5-trihydroxyphenyl)-, [2R-[2.alpha.,3.alpha.,6(1S*,2R*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH

MF C30 H28 O14
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)

Absolute stereochemistry.



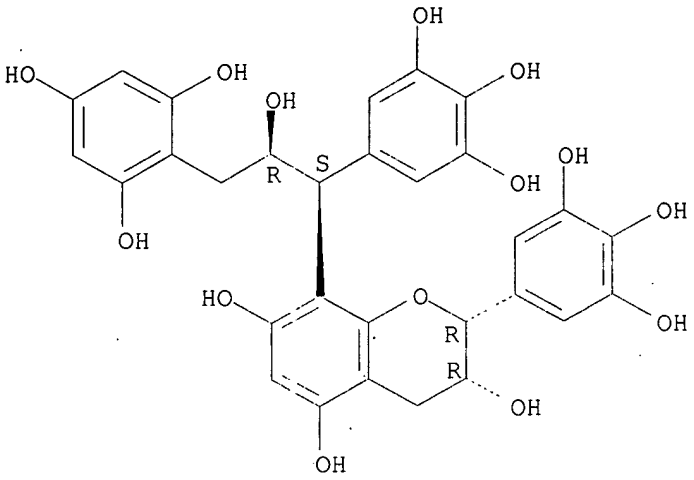
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 111:76723

L21 ANSWER 33 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **121795-71-9** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 3,4-dihydro-8-[2-hydroxy-1-(3,4,5-trihydroxyphenyl)-3-(2,4,6-trihydroxyphenyl)propyl]-2-(3,4,5-trihydroxyphenyl)-, [2R-[2.alpha.,3.alpha.,8(1S*,2R*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C30 H28 O14
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT
(*File contains numerically searchable property data)

Absolute stereochemistry.



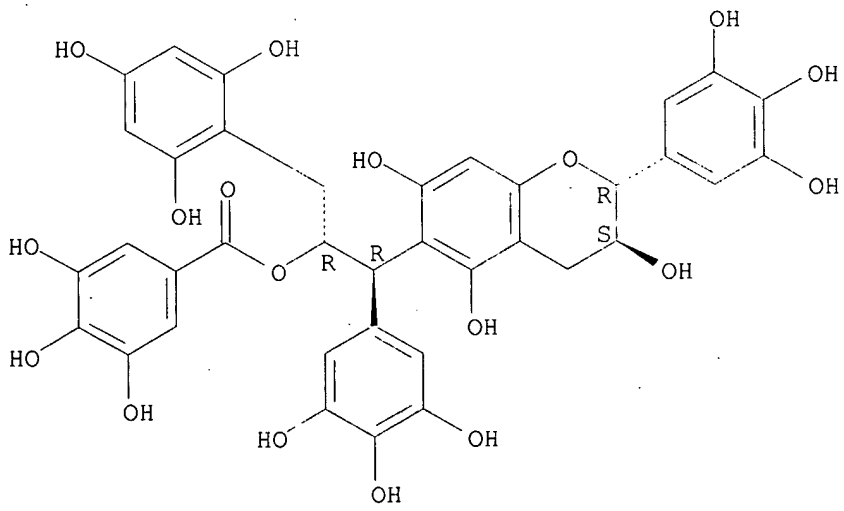
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 111:76723

L21 ANSWER 34 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **121795-70-8** REGISTRY
CN Benzoic acid, 3,4,5-trihydroxy-, 2-[3,4-dihydro-3,5,7-trihydroxy-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-6-yl]-2-(3,4,5-trihydroxyphenyl)-1-[(2,4,6-trihydroxyphenyl)methyl]ethyl ester, [2R-[2.alpha.,3.beta.,6(1R*,2R*)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C37 H32 O18
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)

Absolute stereochemistry.



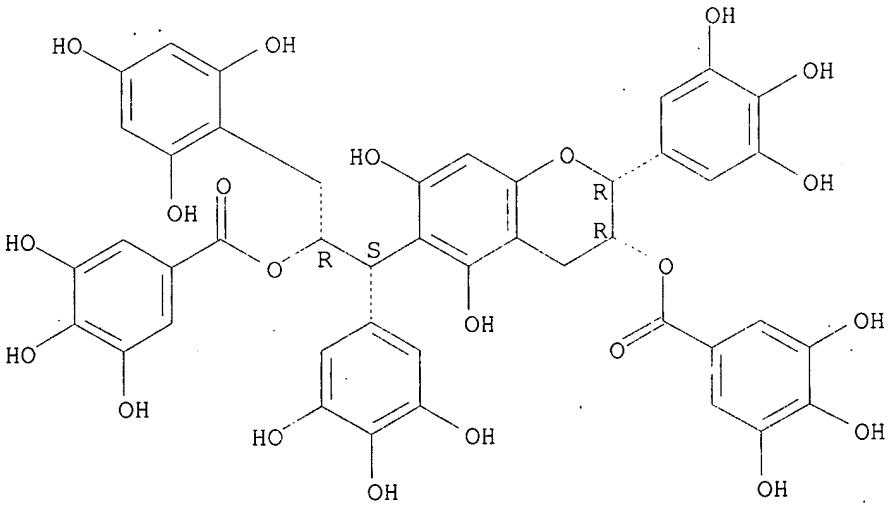
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 111:76723

L21 ANSWER 35 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **121795-67-3** REGISTRY
CN Benzoic acid, 3,4,5-trihydroxy-, (1R,2S)-2-[(2R,3R)-3,4-dihydro-5,7-dihydroxy-3-[(3,4,5-trihydroxybenzoyl)oxy]-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-6-yl]-2-(3,4,5-trihydroxyphenyl)-1-[(2,4,6-trihydroxyphenyl)methyl]ethyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, 3,4,5-trihydroxy-, 2-[3,4-dihydro-5,7-dihydroxy-3-[(3,4,5-trihydroxybenzoyl)oxy]-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-6-yl]-2-(3,4,5-trihydroxyphenyl)-1-[(2,4,6-trihydroxyphenyl)methyl]ethyl ester, [2R-[2.alpha.,3.alpha.,6(1R*,2S*)]]-
OTHER NAMES:
CN (+)-Assamicain C
CN Assamicain C
FS STEREOSEARCH
MF C44 H36 O22
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, NAPRALERT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:367880

REFERENCE 2: 133:172213

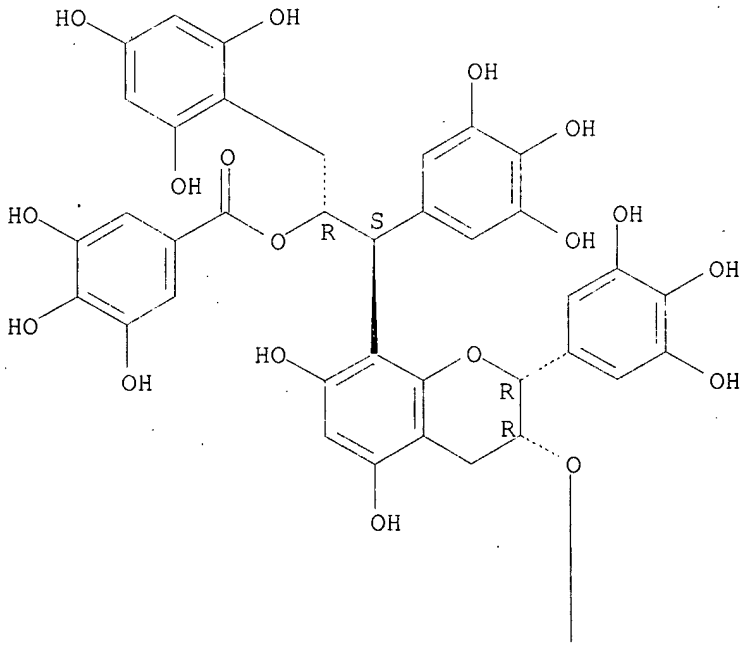
REFERENCE 3: 124:331679

REFERENCE 4: 111:76723

L21 ANSWER 36 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **121795-66-2** REGISTRY
CN Benzoic acid, 3,4,5-trihydroxy-, (1R,2S)-2-[(2R,3R)-3,4-dihydro-5,7-dihydroxy-3-[(3,4,5-trihydroxybenzoyl)oxy]-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-8-yl]-2-(3,4,5-trihydroxyphenyl)-1-[(2,4,6-trihydroxyphenyl)methyl]ethyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, 3,4,5-trihydroxy-, 2-[3,4-dihydro-5,7-dihydroxy-3-[(3,4,5-trihydroxybenzoyl)oxy]-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-8-yl]-2-(3,4,5-trihydroxyphenyl)-1-[(2,4,6-trihydroxyphenyl)methyl]ethyl ester, [2R-[2.alpha.,3.alpha.,8(1R*,2S*)]]-
OTHER NAMES:
CN (-)-Assamicain A
CN Assamicain A
FS STEREOSEARCH
MF C44 H36 O22
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, NAPRALERT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.

PAGE 1-A



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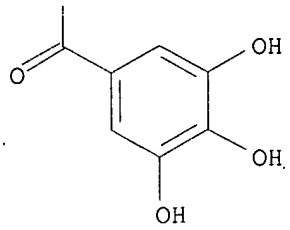


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:367880

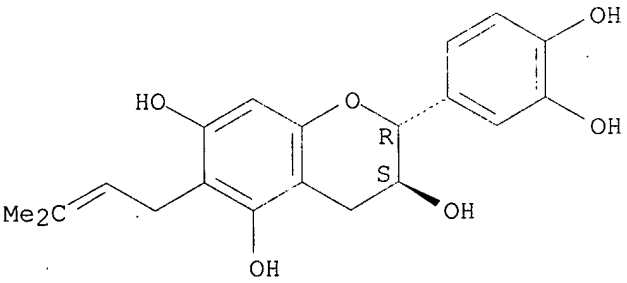
REFERENCE 2: 133:172213

REFERENCE 3: 124:331679

REFERENCE 4: 111:76723

L21 ANSWER 37 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **115532-13-3** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-3,4-dihydro-6-(3-methyl-2-butenyl)-, (2R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H22 O6
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

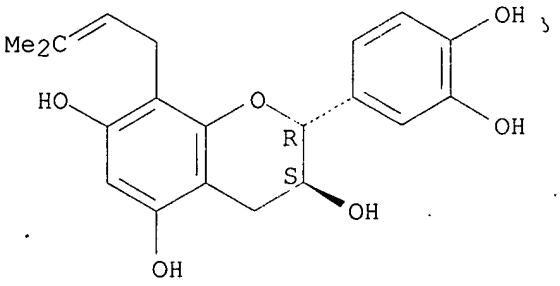
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 109:70343

L21 ANSWER 38 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **115532-12-2** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-3,4-dihydro-8-(3-methyl-2-butenyl)-, (2R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H22 O6

SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



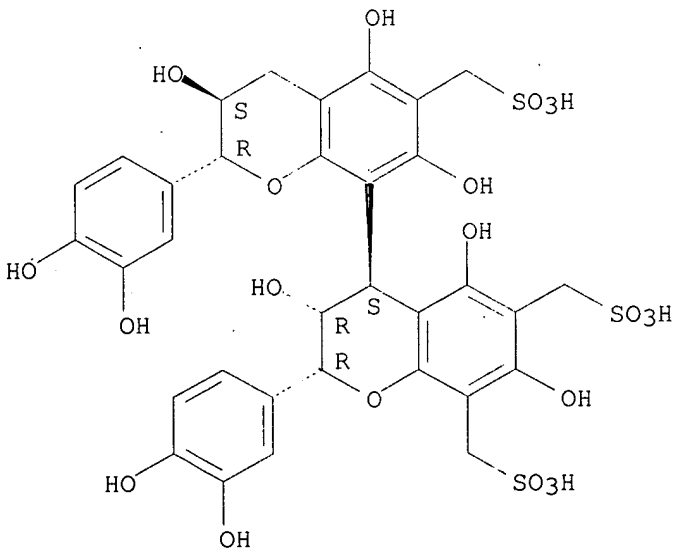
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 109:70343

L21 ANSWER 39 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **114903-07-0** REGISTRY
CN [4,8'-Bi-2H-1-benzopyran]-6,6',8-trimethanesulfonic acid, 2,2'-bis(3,4-dihydroxyphenyl)-3,3',4,4'-tetrahydro-3,3',5,5',7,7'-hexahydroxy-, [2.alpha.,3.alpha.,4.beta.(2'R*,3'S*)]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C33 H32 O21 S3
SR CA
LC STN Files: CA, CAPLUS

Relative stereochemistry.

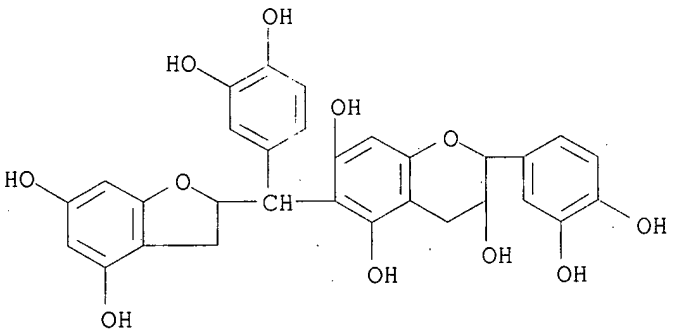


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 109:8263

L21 ANSWER 40 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **107895-54-5** REGISTRY
CN 3,3',4',5,7-Flavanpentol, 6-[.alpha.-(2,3-dihydro-4,6-dihydroxy-2-benzofuranyl)-3,4-dihydroxybenzyl]- (7CI) (CA INDEX NAME)
FS 3D CONCORD
MF C30 H26 O11
SR CAOLD
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS
(*File contains numerically searchable property data)



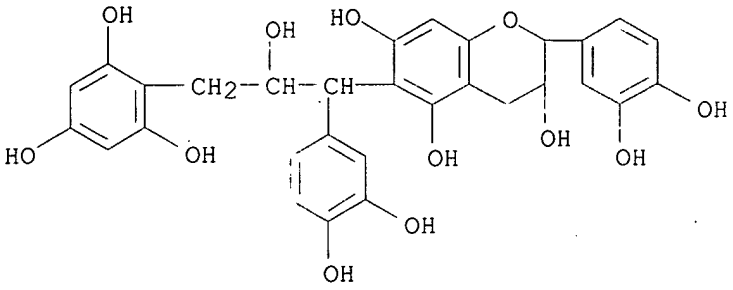
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 59:82178

REFERENCE 2: 58:66387

L21 ANSWER 41 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **96554-19-7** REGISTRY
CN 6-Chromanethanol, .beta.,2-bis(3,4-dihydroxyphenyl)-3,5,7-trihydroxy-.alpha.-(2,4,6-trihydroxybenzyl)- (6CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3,3',4',5,7-Flavanpentol, 6-[3,4-dihydroxy-.alpha.-(.alpha.,2,4,6-tetrahydroxyphenethyl)benzyl]- (7CI)
FS 3D CONCORD
MF C30 H28 O12
CI COM
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)
6 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 61:61565

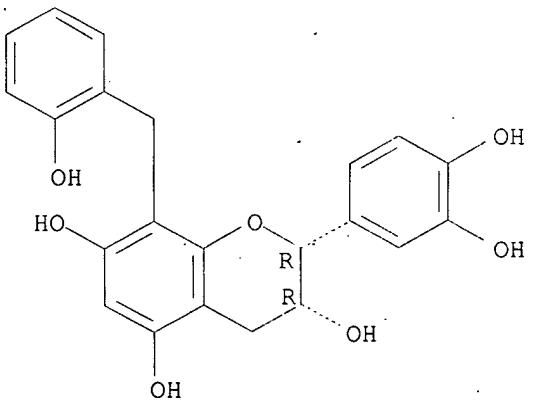
REFERENCE 2: 59:82178

REFERENCE 3: 59:41567

REFERENCE 4: 58:41030

L21 ANSWER 42 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **82894-96-0** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-3,4-dihydro-8-[(2-hydroxyphenyl)methyl]-, (2R-cis)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H20 O7
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)

Absolute stereochemistry.



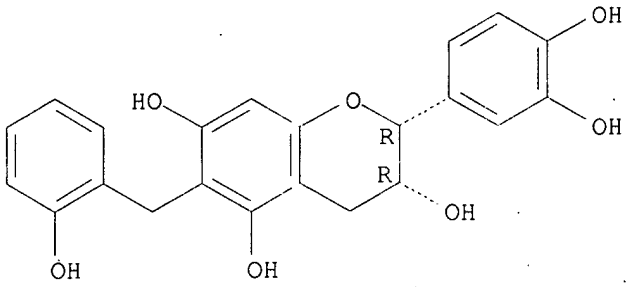
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 97:126863

L21 ANSWER 43 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **82894-95-9** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-3,4-dihydro-6-[(2-hydroxyphenyl)methyl]-, (2R-cis)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H20 O7
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)

Absolute stereochemistry.



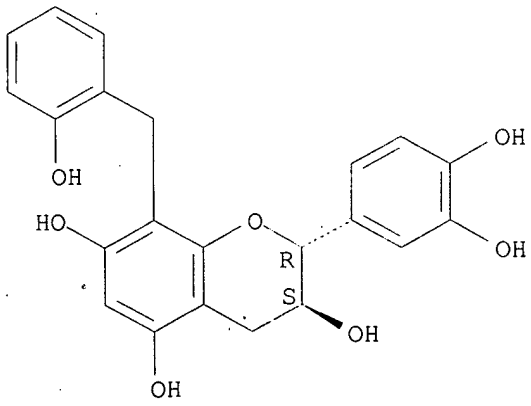
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 97:126863

L21 ANSWER 44 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **82246-00-2** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-3,4-dihydro-8-[(2-hydroxyphenyl)methyl]-, (2R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H20 O7
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

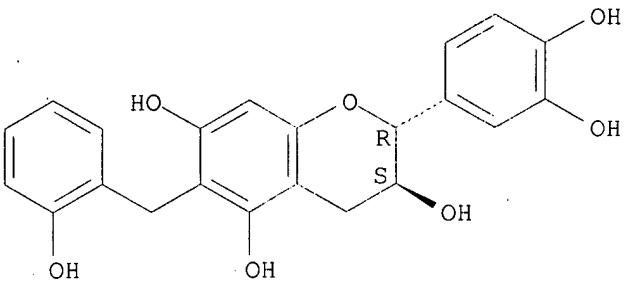
2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 97:126863

REFERENCE 2: 97:38170

L21 ANSWER 45 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **82245-99-6** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-3,4-dihydro-6-[(2-hydroxyphenyl)methyl]-, (2R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H20 O7
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)

Absolute stereochemistry.



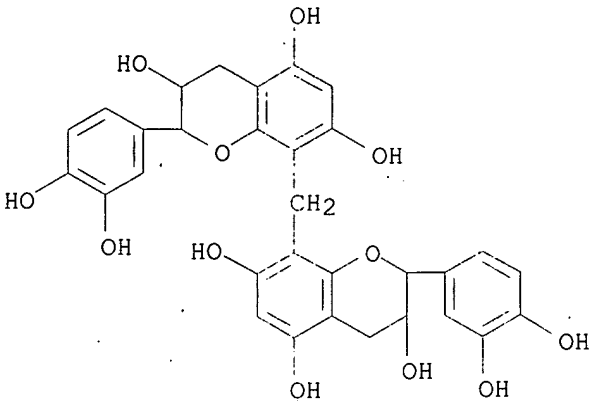
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 97:126863

REFERENCE 2: 97:38170

L21 ANSWER 46 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **81555-08-0** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 8,8'-methylenebis[2-(3,4-dihydroxyphenyl)-3,4-dihydro-, (2R,2'R,3S,3'S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1-Benzopyran-3,5,7-triol, 8,8'-methylenebis[2-(3,4-dihydroxyphenyl)-3,4-dihydro-, [2R-[2.alpha.,3.beta.,8(2'R*,3'S*)]]-
OTHER NAMES:
CN Bis-8,8'-catechinylmethane
MF C31 H28 O12
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

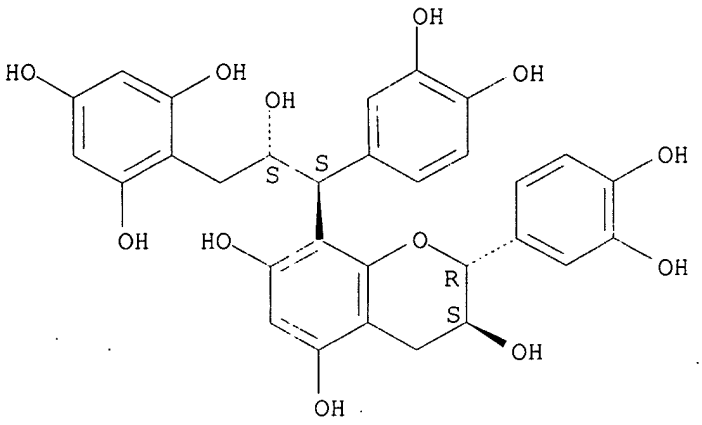
REFERENCE 1: 138:384353

REFERENCE 2: 138:163393

REFERENCE 3: 97:39430

L21 ANSWER 47 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **76250-49-2** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-8-[(1S,2S)-1-(3,4-dihydroxyphenyl)-2-hydroxy-3-(2,4,6-trihydroxyphenyl)propyl]-3,4-dihydro-, (2R,3S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-8-[1-(3,4-dihydroxyphenyl)-2-hydroxy-3-(2,4,6-trihydroxyphenyl)propyl]-3,4-dihydro-, [2R-[2.alpha.,3.beta.,8(1S*,2S*)]]-
OTHER NAMES:
CN Gambiriin A1
FS STEREOSEARCH
MF C30 H28 O12
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 104:28390

REFERENCE 2: 103:3803

REFERENCE 3: 100:171521

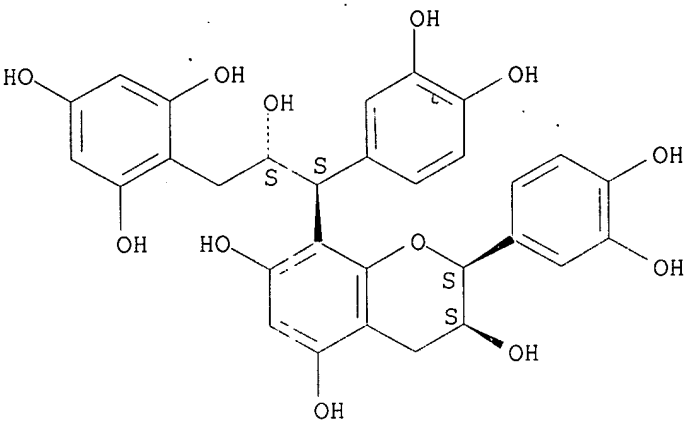
REFERENCE 4: 97:109779

REFERENCE 5: 97:92028

REFERENCE 6: 94:44035

L21 ANSWER 48 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **76250-48-1** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-8-[(1S,2S)-1-(3,4-dihydroxyphenyl)-2-hydroxy-3-(2,4,6-trihydroxyphenyl)propyl]-3,4-dihydro-, (2S,3S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-8-[1-(3,4-dihydroxyphenyl)-2-hydroxy-3-(2,4,6-trihydroxyphenyl)propyl]-3,4-dihydro-, [2S-[2.alpha.,3.alpha.,8(1R*,2R*)]]-
OTHER NAMES:
CN Gambiriin A2
FS STEREOSEARCH
MF C30 H28 O12
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

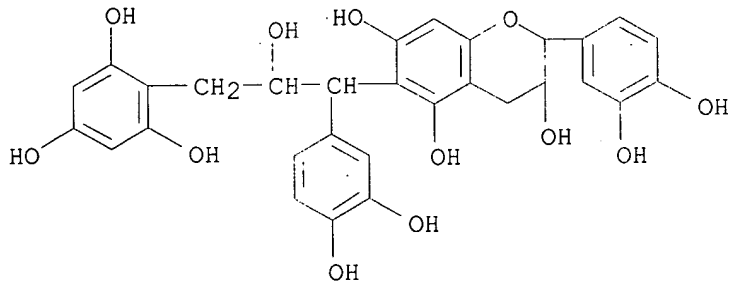
3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 97:109779

REFERENCE 2: 97:92028

REFERENCE 3: 94:44035

L21 ANSWER 49 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **76236-92-5** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-6-[1-(3,4-dihydroxyphenyl)-2-hydroxy-3-(2,4,6-trihydroxyphenyl)propyl]-3,4-dihydro-(9CI) (CA INDEX NAME)
OTHER NAMES:
CN Gambiriin A3
MF C30 H28 O12
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

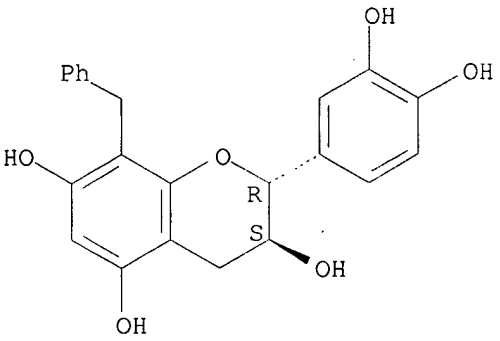
REFERENCE 1: 97:109779

REFERENCE 2: 97:92028

REFERENCE 3: 94:44035

L21 ANSWER 50 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **20728-79-4** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-3,4-dihydro-8-(phenylmethyl)-, (2R,3S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-3,4-dihydro-8-(phenylmethyl)-, (2R-trans)-
CN 3,3',4',5,7-Flavanpentol, 8-benzyl-, (+)- (8CI)
FS STEREOSEARCH
MF C22 H20 O6
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL

Absolute stereochemistry. Rotation (-).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

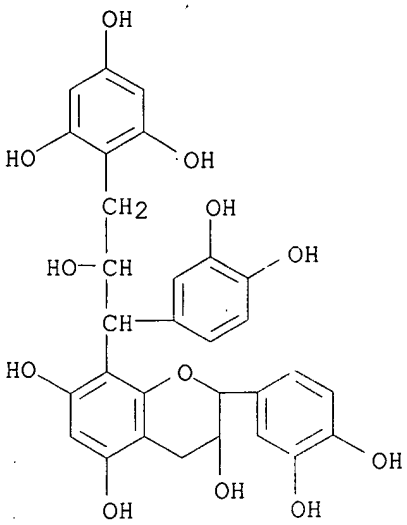
REFERENCE 1: 134:252168

REFERENCE 2: 102:72319

REFERENCE 3: 100:209512

REFERENCE 4: 69:59534

L21 ANSWER 51 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **20454-55-1** REGISTRY
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-8-[1-(3,4-dihydroxyphenyl)-2-hydroxy-3-(2,4,6-trihydroxyphenyl)propyl]-3,4-dihydro-(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3,3',4',5,7-Flavanpentol, 8-[3,4-dihydroxy-.alpha.-(.alpha.,2,4,6-tetrahydroxyphenethyl)benzyl]- (8CI)
OTHER NAMES:
CN Dicatechin
MF C30 H28 O12
LC STN Files: BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAPLUS
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 85:92155

REFERENCE 2: 85:61371

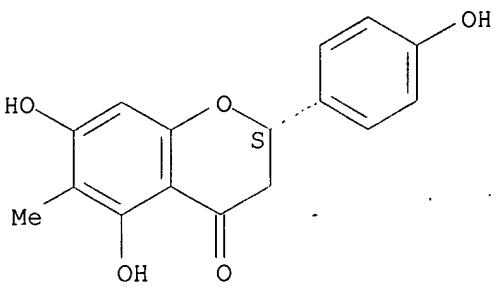
REFERENCE 3: 69:10323

REFERENCE 4: 68:22830

REFERENCE 5: 63:32886

L21 ANSWER 52 OF 52 REGISTRY COPYRIGHT 2003 ACS on STN
RN **14348-16-4** REGISTRY
CN 4H-1-Benzopyran-4-one, 2,3-dihydro-5,7-dihydroxy-2-(4-hydroxyphenyl)-6-methyl-, (2S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 4H-1-Benzopyran-4-one, 2,3-dihydro-5,7-dihydroxy-2-(4-hydroxyphenyl)-6-methyl-, (S)-
CN Flavanone, 4',5,7-trihydroxy-6-methyl- (8CI)
OTHER NAMES:
CN 8-Demethylfarrerol
CN NSC 180246
CN Poriol
FS STEREOSEARCH
DR 21568-22-9
MF C16 H14 O5
LC STN Files: AGRICOLA, BEILSTEIN*, BIOSIS, CA, CAPLUS, NAPRALERT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

11 REFERENCES IN FILE CA (1907 TO DATE)
11 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:300442

REFERENCE 2: 138:69904

REFERENCE 3: 115:228399

REFERENCE 4: 107:233168

REFERENCE 5: 88:85995

REFERENCE 6: 78:55368

REFERENCE 7: 76:70284

REFERENCE 8: 72:75613

REFERENCE 9: 70:88193

REFERENCE 10: 70:68063